



# Report to the Secretary of State for Communities and Local Government

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Town and Country Planning Act 1990

Harborough District Council

appeal by

Nuon UK Ltd

Inquiry opened on 14 July 2009

Land to the north-east of Swinford

File Ref: APP/F2415/A/09/2096369

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## ABBREVIATIONS

AM	Aerodynamic modulation of aerodynamic noise
AOD	Above Ordnance Datum
APAC	Area of Particularly Attractive Countryside
BHS	British Horse Society
CAA	Civil Aviation Authority
CPRE	The Campaign to Protect Rural England
DMV	Deserted medieval village
EA	Environment Agency
EH	English Heritage
EHO	Environmental Health Officer
ES	Environmental Statement
ETSU	ETSU-R-97 by Energy Technology Support Unit
HA	Highways Agency
HDC	Harborough District Council
InsQ	Inspector's question
LCA	Landscape Character Area
LCArch	Leicestershire County Archaeology
LCC	Leicestershire County Council
LP	Harborough District Local Plan, adopted 2001
MWe	Megawatts (electricity)
NATS	National Air Traffic Service
NE	Natural England
PIM	Pre-Inquiry Meeting
PINS	The Planning Inspectorate
PPS1	Planning Policy Statement 1: <i>Delivering Sustainable Development</i>
PPS1Supp	<i>Supplement on Planning and Climate Change</i>
PPS7	Planning Policy Statement 7: <i>Sustainable Development in Rural Areas</i>
PPS9	Planning Policy Statement 9: <i>Biodiversity and Geological Conservation</i>
PPG13	Planning Policy Guidance Note 13, <i>Transport</i>
PPG15	Planning Policy Guidance Note 15, <i>Planning and the Historic Environment</i>
PPG16	Planning Policy Guidance Note 16, <i>Archaeology and Planning</i>
PPS22	Planning Policy Statement 22: <i>Renewable Energy</i>
PPS22CG	<i>Planning for Renewable Energy – A Companion Guide to PPS22</i>
PPG24	Planning Policy Guidance Note 24, <i>Planning and Noise</i>
ProWA	Pro Wind Alliance
PRoW	Public right of way
RE	Renewable energy
RHPG	The parkland at Stanford Hall which appears on the Register of Parks and Gardens of Special Historic Interest
RSS8	East Midlands Regional Plan, March 2009
SAM	Scheduled Ancient Monument
SoCG	Statement of Common Ground
SoS	Secretary of State for Communities and Local Government
SP	The Leicestershire, Leicester and Rutland Structure Plan 1996-2016
SSWFAG	Stop Swinford Wind Farm Action Group
WHO	World Health Organisation
WT1-WT11	Proposed wind turbines 1 to 11
ZTV	Zone of Theoretical Visibility                      CZTV Cumulative ZTV

**File Ref: APP/F2415/A/09/2096369**

**Land to the north-east of Swinford**

- The appeal is made under section 78 of the Town and Country Planning Act 1990 against a failure to give notice within the prescribed period of a decision on an application for planning permission.
- The appeal is made by Nuon UK Ltd against Harborough District Council.
- The application Ref:08/00506/FUL is dated 7 April 2008.
- The development proposed is the construction and operation of a wind farm.

**Summary of Recommendation: The appeal be allowed, and planning permission granted subject to conditions.**

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**Procedural Matters**

1. Notwithstanding the description of the proposed development on the application form, Harborough District Council (HDC) and Nuon UK Ltd (Nuon) agree that the proposal should be described as; "The construction and operation of a wind farm consisting of eleven 125 m turbines, control building, temporary construction compound, anemometer mast, vehicular access, accommodation works and tracks at land north-east of Swinford." <sup>1</sup> Individual wind turbines are referred to as WT1-WT11 in this report.
2. HDC failed to make a decision on the planning application in the required amount of time. However, had it been able to do so, it would have refused the application.<sup>2</sup> The reasons for refusal would have made reference to:
  - (1) "The proposed development, by reason of its scale, appearance, siting and nature, would have a harmful impact on the setting of Stanford Hall (Grade I listed), together with its registered historic park and garden (Grade II). Moreover, the proposed scale, arrangement and siting of the proposed development have not been demonstrated to be avoidable with reference to alternatives. The proposal is therefore contrary to Policy EV/16 of the Harborough District Local Plan and Policy 27 of the adopted RSS8 along with Policy 26 of the emerging RSS8 and the aims and objectives of PPG15.
  - (2) The proposed development, by reason of its scale, appearance, siting and nature, would have a harmful impact on the setting of the Stormsworth Scheduled Ancient Monument. Moreover, the proposed scale, arrangement and siting of the proposed development have not been demonstrated to be avoidable with reference to alternatives. The proposal is therefore contrary to Policy 27 of the adopted RSS8 along with Policy 26 of the Emerging RSS8.
  - (3) The applicant has failed to demonstrate that the proposed development, by reason of its siting, scale and nature, would not have a harmful impact on buried archaeological remains. Moreover, the proposed scale, arrangement and siting of the proposed development have not been demonstrated to be avoidable with reference to alternatives. The proposal

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<sup>1</sup> Document ID6.

<sup>2</sup> Planning Committee, 10 March 2009 – Document N3.

is therefore contrary to Policy 27 of the adopted RSS8 along with Policy 26 of the Emerging RSS8 and the aims and objectives of PPG16.”

3. The appeal was recovered for determination by the Secretary of State (SoS) by letter, dated 12 February 2009, because the appeal relates to proposals of major significance for the delivery of the Government’s Climate Change Programme and Energy Policies.<sup>3</sup>
4. On application, the Stop Swinford Wind Farm Action Group (SSWFAG) was granted Rule 6(6) status pursuant to the Town and Country Planning (Inquiries Procedure) (England) Rules 2000 (hereinafter referred to as the Rules). SSWFAG coordinated opposition to the proposed development and participated fully in the Inquiry process.
5. I held a Pre-Inquiry Meeting (PIM) on 12 May 2009.<sup>4</sup> The Inquiry was held on 14-16, 21-24, 28, 29 and 31 July 2009 (10 days). I completed accompanied site visits on 17 and 30 July. In addition, I undertook unaccompanied visits on 13, 20 and 27 July. After the close of the Inquiry, and with the prior agreement of the parties, I visited the wind farm at Burton Wold on 3 August, and completed other unaccompanied visits in the vicinity of the appeal site on 4 August and 9 September 2009. I travelled extensively in the locality, visiting vantage points and footpaths identified by the parties, and view points included in the landscape assessment. I also visited at different times of the day and at night, and during different weather conditions. Where I omitted some view points or parts of footpaths, it was because I was satisfied that I had already seen representative views.
6. The application was accompanied by an Environmental Statement (ES).<sup>5</sup> Further environmental information was prepared, submitted to HDC and advertised in accordance with the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999 (hereinafter referred to as the EIA Regulations). Additional photomontages were also prepared and further information provided for Natural England (NE).<sup>6</sup> So as to save time at the PIM, I asked for clarification regarding Schedule 4 of the EIA Regulations concerning an outline of the main alternatives studied by the appellant. Nuon’s response, dated 24 April 2009, referred to Chapter 4 of the ES and to its Table 4.1 about design iterations.<sup>7</sup> SSWFAG’s statement of case referred to certain omissions in the ES. It was clarified at the PIM that Nuon had given anemometer data to SSWFAG the day before the PIM. At the time of the PIM this data was still being assessed by SSWFAG, but no one formally sought additional information under an EIA Regulation 19 Direction.<sup>8</sup> No specific submissions were subsequently made at the Inquiry regarding the scope or content of the ES and arrangements for its publicity. However, HDC reserved its position as to the adequacy of the ES with respect to that part of its putative reasons for refusal which state that the

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<sup>3</sup> Document CD22.

<sup>4</sup> Notes of PIM are at Document CD20.

<sup>5</sup> Document N2.1-2.4.

<sup>6</sup> See the Statement of Common Ground (SoCG) - Document N10 paragraphs 3.1-3.3.3. The SoCG is unsigned but it was confirmed at the Inquiry that this is an agreed position between HDC and Nuon.

<sup>7</sup> Document CD19 – this letter was copied to the other parties prior to PIM.

<sup>8</sup> Document CD20.

proposed scale, arrangement and siting of the proposed development have not been demonstrated to be avoidable with reference to alternatives. I deal with this later in my conclusions. I have considered the evidence presented and representations made to the Inquiry as forming part of the environmental information as defined in the EIA Regulations.

7. The Planning Inspectorate's (PINS) letter, dated 9 March 2009, pursuant to Rule 6(12) sets out the following matters about which the SoS particularly wished to be informed for the purposes of considering this appeal;
  - (a) the extent to which the proposed development would be in accordance with the development plan for the area;
  - (b) the extent to which the proposed development would be consistent with the objectives of Government policy on energy as set out in Planning Policy Statement 22: *Renewable Energy* (PPS22); the wider social, economic, and environmental benefits of the development; and the extent to which any adverse impact has been minimised through careful consideration of location, scale, design and other measures;
  - (c) the extent to which the proposed development would be consistent with the Government's policy on energy as set out in the Energy White Paper, *Meeting the Energy Challenge* (CM 7124 May 2007);
  - (d) the impact on archaeological remains;
  - (e) the landscape and visual impact of the proposed development;
  - (f) the noise generated by the proposed development and its impact on residential properties;
  - (g) whether any permission granted for the proposed development should be subject to any conditions and, if so, the form these should take; and
  - (h) any other matters the Inspector considers relevant.<sup>9</sup>
8. With respect to (h) above, I indicated at the PIM that from what I had then read, that this should include the effects on cultural heritage, and whether the environmental and economic benefits of the scheme would be sufficient to outweigh any harm that might be caused. I also indicated that I would like to hear the parties' views about the effects on the living conditions of local residents and on nature conservation before considering whether these should also be main considerations.<sup>10</sup> With the agreement of the parties, the Inquiry heard evidence under the following general topics: A - landscape and visual issues, B – cultural heritage and archaeology, C – noise and living conditions, D – health and other effects/issues, E – planning balance and policy.
9. HDC's third reason for refusal, had it been able to determine the application, concerning archaeology, was based on the advice provided by Leicestershire County Archaeology (LCArch). Following additional survey work LCArch formally withdrew its objection. HDC advised by letter, dated 25 June 2009, that subject to the imposition of appropriate conditions it had resolved not to defend its putative third reason for refusal.<sup>11</sup>

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<sup>9</sup> Document CD21.

<sup>10</sup> Document CD20.

<sup>11</sup> Document CD24.

## The Site and Surroundings<sup>12</sup>

10. The appeal site encompasses about 350 ha and is shown on Fig.1.1 of the ES.<sup>13</sup> The site's wider context is apparent from ES Fig.1.2. The closest settlements to the site are the villages of Swinford (about 0.5 km to the south of the appeal site boundary), South Kilworth (about 1.6 km to the east) and Walcote (about 1.9 km to the north). The town of Lutterworth is located some 3.5 km to the north-west, and Rugby is 5.5 km to the south-west.
11. The M1 motorway runs parallel to the western boundary of the appeal site at an average separation distance of 1.2 km, with its junction with the M6 motorway, the Catthorpe Interchange<sup>14</sup>, being 1.7 km to the south-west. The closest A roads are the A4304, whose route brings it to within 1.4 km of the north-eastern corner of the appeal site, and the A14, which is 1.4 km to the south.
12. The site contains a mosaic of small and medium sized regular shaped arable and pasture fields enclosed by hedgerows often with hedgerow trees.<sup>15</sup> Small ponds are common and small water courses run both northwards and southwards from the low plateau located in the central part of the application site. A north/south line of six electricity pylons, estimated to be 46 m high crosses the site.<sup>16</sup> There are a couple of barns and a covered reservoir on the site. There are no residential properties within the site, and the location of dwellings in the vicinity is shown on ES Fig.6.2.
13. The site has a southern aspect, gently sloping from a maximum height of 154 m AOD and falls away to 117 m AOD at its southern edge.<sup>17</sup> It is bounded by minor roads along sections of its southern and western boundaries and is bisected along its middle by another route with public access on a broad north/south alignment. Other Public Rights of Way (PRoW) within 2.5 km of the proposed turbines are shown on ES Fig.6.3.<sup>18</sup>
14. The site includes part of the Stormsworth deserted medieval village and fishpond (DMV), part of which is a Scheduled Ancient Monument (SAM). It includes earthwork remains of a series of house platforms, a hollow-way measuring a maximum of 8 m wide and 1.5 m deep, along with well preserved medieval ridge and furrow ploughing. Part of the village boundary is demarcated by a ditch and a square fishpond remains in the marshy south-western corner of the SAM. The site provides important information on the diversity of medieval settlement patterns and farming economy.<sup>19</sup>

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<sup>12</sup> Based on ES Document N2.1 section 1.10 and SoCG Document N10 paragraphs 10.1-10.3.

<sup>13</sup> Document N2.2.

<sup>14</sup> Which is proposed to be upgraded – see Document N24.

<sup>15</sup> Field boundaries are currently very similar to those which existed in 1889 see PoE24.2

Appendix 4.

<sup>16</sup> Document N2.1 paragraph 6.3.7.

<sup>17</sup> PoE8.3 Figs.2 and 6.

<sup>18</sup> *[Inspector's note - There is also a permissive path around fields in the vicinity of proposed WT7 which was apparent on my site visit.]*

<sup>19</sup> PoE2.3 Appendix 1.

15. Parkland associated with a country house, the Grade I listed Stanford Hall<sup>20</sup>, which appears as Grade II on the Register of Parks and Gardens of Special Historic Interest (RHPG), is located to the south-east of the appeal site on the opposite side of Rugby Road. This was landscaped in the mid-eighteenth century, but with traces of the seventeenth century geometric layout surviving, particularly the north avenue and other avenues of trees.<sup>21</sup> The Registered park extends to the River Avon, and its large reservoir, in the east, and to the edge of Stanford on Avon in the south. In the west an elongated part of the park projects to the edge of Swinford. The Register records that the park divides into two parts. Around the Hall is what it terms the inner park, which is low, permanent pasture and amply supplied with trees, where extensive areas of ridge and furrow survive. The northern half of the park is different, rising as it does onto Gravel Hill and Hovel Hill and containing far fewer trees.<sup>22</sup> The Stanford estate previously encompassed most of the appeal site and gates and milestones indicate the influence of the estate on the surrounding landscape.<sup>23</sup>
16. Stanford Hall is Queen Anne by design and built for its advantage within a formal park. Special interest groups are taken up onto the roof to view the layout of the formal park. There are other listed buildings and structures within the Stanford Hall estate.<sup>24</sup>
17. The core of older buildings in Swinford, along with an avenue of mature trees extending towards Stanford Hall, lie within Swinford Conservation Area.<sup>25</sup> Swinford contains a number of listed buildings.<sup>26</sup> The Grand Union/Oxford Canal Conservation Area lies some distance to the east of Stanford on Avon and South Kilworth.<sup>27</sup> Other features of cultural heritage interest are shown on ES Figs.11.1, 11.2 and 11.3.
18. In the Countryside Agency's 1998 Countryside Character Initiative, the appeal site lies mostly within the Leicestershire Vales, with the south-eastern part in the Northamptonshire Uplands.<sup>28</sup> In the Harborough District Landscape Character Assessment the north-western part of the site lies within the Lutterworth Lowlands Local Landscape Character Area (LCA) and the south-eastern part within the Laughton Hills LCA.<sup>29</sup> The Lutterworth Lowlands LCA is an open and relatively flat, to gently rolling area, which lacks large woodland areas. The M1 motorway acts as a significant barrier across the landscape in visual, noise and connectivity terms, and traffic noise is locally intrusive. Laughton Hills LCA is a

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<sup>20</sup> Details appear in the listed description for Stanford Hall and associated buildings at PoE1.3 Appendix 2.

<sup>21</sup> PoE8.3 Figs.7 and 8. *[Inspector's note - See also the aerial photographs at S(CH)1 Volume 3 Figs.4-8 in which the northern avenue is an imposing feature. However, it was evident from my site visits that in views from the ground the avenue as a striking landscape feature is only apparent from views at or in line with either end of the avenue, or from within the avenue itself. Otherwise it appears to blend in with the wider treed landscape and woodland.]*

<sup>22</sup> The park is more fully described in Document N(CA)3.

<sup>23</sup> PoE8.3 Figs.3-5 and Appendix 5.

<sup>24</sup> Mr Fothergill PoE22.

<sup>25</sup> PoE8.3 Fig.3 and Appendix 8. A Conservation Area Character Statement is at PoE24.2 Appendix 1A.

<sup>26</sup> PoE24.2 Appendix 3.

<sup>27</sup> PoE14.2 Appendix 10 Map 2.

<sup>28</sup> Document N2.2 Fig.6.8.

<sup>29</sup> PoE8.3 Fig.1 and Document N(LV)8.

distinct ridgeline of rolling hills with steep sides. Woodland is generally limited, but there are significant woodlands around Stanford Park and North Kilworth House.<sup>30</sup> A small area of the National Forest in Charnwood lies some 24 km to the north of the site. A local landscape designation, Area of Particularly Attractive Countryside (APAC), is located some 6 km from the site.<sup>31</sup>

19. Constraints to development within the site are shown on ES Fig.4.4, including electricity transmission lines, a gas pipeline and the SAM. A good overview of the site and its context is apparent from the aerial photographs submitted.<sup>32</sup> The site has no relevant planning history.

### **Planning Policy**

20. The development plan for the area includes the East Midlands Regional Plan, March 2009 (RSS8).<sup>33</sup> Policy 1 sets out core objectives, including, amongst other things, to protect and enhance the environment, to reduce the causes of climate change by minimising emissions of CO<sub>2</sub> in order to meet the national target through maximising the level of renewable energy (RE) generation and other measures.
21. RSS8 Policy 26 provides that sustainable development should ensure the protection, appropriate management and enhancement of the Region's natural and cultural heritage. It sets out principles to be applied, including; that nationally designated historic assets should receive the highest level of protection; that damage to historic assets or their settings should be avoided wherever and as far as possible, recognising that such assets are usually irreplaceable; unavoidable damage must be minimised and clearly justified by a need for development in that location which outweighs the damage that would result; there should be a net increase in the quality and active management of historic assets in ways that promote adaptation to climate change, and an increase in the quality of environmental assets generally. Policy 27 states, amongst other things, that the historic environment should be understood, conserved and enhanced, in recognition of its own intrinsic value, and its contribution to the Region's quality of life. Policy 31 has a similar aim for the Region's natural and heritage landscapes.
22. RSS8 Policy 40 concerns regional priorities for low carbon energy generation. It promotes the development of a distributed energy network using local low carbon and renewable resources. In order to help meet national targets low carbon energy proposals in locations where environmental, economic and social impact can be addressed satisfactorily should be supported, so as to achieve the indicative regional targets for RE set out in Appendix 5. This gives targets of 122 MWe in 2010 and 175 MWe for 2020/2026 for On-shore Wind, compared with a current capacity of 54 MWe. It also sets out matters for consideration in establishing criteria for onshore wind energy, including; landscape and visual impact; effects on the natural and cultural environment; effects on the built environment (including noise intrusion); the number and size of turbines;

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<sup>30</sup> Document N2.1 paragraphs 6.3.54 and 6.3.52.

<sup>31</sup> See Landscape Context: Landscape Designations and Registered Battlefields at Document N2.2 Fig.6.10.

<sup>32</sup> See especially Fig.28 in N(LV)18, PoE7.3 Appendices 1e and 1g and WS1.

<sup>33</sup> Document CD1.

- cumulative impact (including 'intervisibility'); the contribution towards regional renewable targets and to environmental objectives on climate change.
23. Saved policies of The Leicestershire, Leicester and Rutland Structure Plan 1996-2016 (SP) concern housing provision.<sup>34</sup> Saved Policies of the Harborough District Local Plan, adopted 2001 (LP) are set out in Document CD3. LP Policy EV/5 presumes against development in the countryside unless, amongst other things, it would not adversely affect the character and appearance of the countryside. LP Policy EV/16 provides that proposals for development on land within the curtilage of a listed building or within the setting of a listed building or a building of character in a conservation area should respect the setting of the listed building. This accords with the requirement of Section 66(1) of the Planning (Listed Buildings and Conservation Areas) Act 1990 to have special regard to the desirability of preserving the setting of a listed building, and is in line with national advice in PPG15. LP Policy EV/18 concerns development in historic parks and gardens, but the supporting text encourages the sympathetic management and protection of such sites and their settings from new development which would destroy or harm their historic interest.<sup>35</sup> Other relevant LP Policies cited in the SoCG include; Policy IN/1 standards of development, Policy RM/10 maintenance and protection of habitats, Policy EV/20 landscaping, Policy EV/23 control of pollution and noise, Policy TR/3 development impacts on the existing road network.<sup>36</sup>
24. The SoCG cites national guidance in PPS1, PPS1Supp, PPS7, PPS9, PPG13, PPG15, PPG16, PPS22, PPS22CG and PPG24. It also refers to other documents about climate change and energy strategy, which are material considerations.<sup>37</sup> PPS7 advises that the quality and character of the wider countryside should be protected and, where possible, enhanced. PPG15 advises that the effects of proposed development on a registered park or garden or its setting is a material consideration in the determination of a planning application. It also refers to views in and out of conservation areas. PPG15 notes, albeit in advice about publishing notices of applications, that a proposed high or bulky building might also affect the setting of a listed building some distance away, or alter views of a historic skyline. Paragraph 8 of PPG16 advises that where nationally important archaeological remains, whether scheduled or not, and their settings, are affected by proposed development there should be a presumption in favour of their physical preservation. I consider PPS22 and PPS22CG in more detail later. PPG24 notes that much of the development necessary for essential infrastructure will generate noise, and that the planning system should not place unjustifiable obstacles in the way of such development. However, it adds that local planning authorities must ensure that development does not cause an unacceptable degree of disturbance.
25. The *Consultation paper on a new Planning Policy Statement 15: Planning for the Historic Environment* and its accompanying *Practice Guide* were published after all evidence had been presented to the Inquiry. However, the parties agreed that this was a matter that they could address in their closing submissions.

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<sup>34</sup> Document CD2.

<sup>35</sup> Document CD3.

<sup>36</sup> SoCG Document N10 paragraphs 6.3.1-6.3.8.

<sup>37</sup> *Ibid* paragraphs 4.1-5.1.9.

## The Proposal<sup>38</sup>

26. The proposed development is for the construction and operation of a wind farm consisting of eleven 125 m turbines, control building, temporary construction compound, anemometer mast, vehicular access, accommodation works and tracks. Wind farm infrastructure would occupy about 4.5 ha of the 350 ha site, as indicated on the layout at ES Fig.4.1, with the remaining areas continuing in agricultural use. The specific choice of turbine has not been made, but the assessment has proceeded on the basis of turbines with a hub height of 80 m and rotor diameter of 90 m, each with a power output of 2.5 MW. All on-site cabling would be underground. An annual generation equivalent to the average needs of approximately 14,000 homes is expected by Nuon on this basis. A typical turbine of the type proposed is shown at ES Fig.4.2, and a typical anemometer mast is depicted at Fig.4.6, but these are illustrative material not forming part of the application plans. The planned operational life of the proposed wind farm is 25 years, after which the ES states that it is assumed that the wind farm would be decommissioned.
27. Vehicular access, as shown on ES Fig.10.1, would be via Junction 20 of the M1 and the minor road network to Swinford Corner. Abnormal loads would exit the M1 southbound via an existing off-slip access between Junctions 20 and 19, which serves the adjacent maintenance area. A new road link via Wood Farm would be necessary, as would the construction of a new access onto the Swinford Corner junction, as shown on ES Figs.4.9 and 4.8, respectively. The latter would require the removal of part of an overgrown hedgerow. Further details about the proposed construction, operation and decommissioning of the wind farm are set out in the ES.<sup>39</sup>
28. The closest 'non-involved' occupied properties would be about 670 m from the nearest turbine (Denyers Barn to WT3; Melbourne Lodge to WT4). The semi-derelict and unoccupied property to the west of Lutterworth Road between Swinford and Swinford Corner would be about 610 m from WT1.<sup>40</sup> WT7 would be 692 m from the dwelling at Poplar's Farm.<sup>41</sup>

## Consultations and Other Agreed Facts<sup>42</sup>

29. Responses to consultation about the proposal are set out in detail in HDC's Committee Report, and so are briefly summarised as follows. The East Midlands Regional Assembly notes that the proposal would meet about 23% of the 2010 regional target, but considers that potential environmental impacts should be matters for local consideration. The East Midlands Development Agency supports the scheme on condition that negative impacts could be mitigated. The views of Leicestershire County Council (LCC), neighbouring planning authorities and Parish Councils are set out in pages 13-23 of the Committee Report.
30. The Environment Agency (EA) has no objections. The application site is underlain by a non-aquifer and there are no private water abstractions within the site boundary. The most significant potential impact of the development would be

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<sup>38</sup> Based on Document N2.1 Section 1.10 and Chapter 4.

<sup>39</sup> *Ibid* Sections 4.5-4.11.

<sup>40</sup> *Ibid* paragraph 4.3.12.

<sup>41</sup> Document N14.

<sup>42</sup> Based on Committee Report Document N3 and SoCG Document N10.

- associated with sediment-laden runoff, which could be controlled through the employment of mitigation measures in accordance with current construction best practice.<sup>43</sup>
31. The Highways Agency (HA) considers it unlikely that the proposals would either cause a sudden distraction to motorists, or any issues arising from structural failure or potential ice throw. An objection regarding movement of abnormal loads was withdrawn following confirmation that only indivisible abnormal loads would use the temporary access via Misterton Depot and that swept path analysis demonstrated that this would not affect mainline traffic.
  32. English Heritage (EH) has been involved in discussions about the proposal since September 2007. EH sought additional information, but maintained concern about the impact of the proposal. EH considers that the 'Photomontage View North West from South Kilworth Road near Hovel Hill' illustrates the parkland character of the registered park and shows turbines breaking the horizon to the north of the road. EH adds that it illustrates the impact upon the registered park, itself the designed setting of the listed building.<sup>44</sup> 'Photomontage View West from South Kilworth Road near Gravel Hill (Right-Hand Section)' shows that the turbines would be clearly apparent from the road through the historic park.<sup>45</sup> EH advised that these montages also illustrate the interrelationship between the Hall and the park, and that this additional information supported its concerns regarding the impact upon the setting of a Grade I listed building and registered park.<sup>46</sup>
  33. The ES identified ten SAMs within 5 km of the site. With the exception of Stormsworth SAM, all were either assessed as being sufficiently screened to obscure or prevent views towards the wind farm or having no above ground remains and therefore not retaining a setting.
  34. As part of the preparation of the ES a Phase I Habitat Survey was undertaken and specific surveys for great crested newts, badgers, bats and water voles were also carried out. The majority of habitat loss associated with the wind farm would be a limited amount of arable and improved grassland pasture, which are habitats of limited ecological value and common in a local, regional and national context. Sections of hedgerow would also be lost to create new access points through field boundaries. Nuon and HDC consider that this loss would be minimal with mature trees being avoided and would have little impact on the nature conservation value of the site. The ES provides for additional compensatory hedgerow planting to be undertaken.
  35. In its initial consultation response NE objected to the proposed development on the ground that inadequate information had been provided to demonstrate whether or not the development would have an adverse effect on protected species. NE's concern related to badgers, but it also raised the issue of night flying birds using the nearby reservoir. Following receipt of further information,

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<sup>43</sup> SoCG Document N10 paragraphs 14.1-14.3.

<sup>44</sup> Grounds of Appeal Document N8 Section 7 Additional PM1. Also in N(LV)15.

<sup>45</sup> *Ibid* Additional PM2.

<sup>46</sup> Letters from EH – Document PoE2.3 Appendices 2.1, 2.3, 2.4 and 2.7.

- NE wrote to the HDC on 18 September 2008 to withdraw its objection to the proposed development.<sup>47</sup>
36. The ES notes that Defence Estates Safeguarding Team has no objection to the proposal, and that Husbands Bosworth and Bruntingthorpe Airfields have confirmed they have no objections.<sup>48</sup> Coventry Airport is the nearest safeguarded civil aviation site, approximately 22 km to the west-south-west of Swinford. The Airport advised, by letter dated 1 July 2009, that it does not object to the proposed wind farm.<sup>49</sup> The Civil Aviation Authority (CAA) indicated that there might be a need to install aviation obstruction lighting. National Air Traffic Service (NATS) has no operational objections to the proposal.
37. The representative viewpoints shown on ES Fig.6.4a and Fig.6.4b and used in the landscape assessment were agreed between Nuon and HDC during the preparation of the ES. In June 2008, HDC commissioned Faulks Perry Culley & Rech to carry out an audit of the landscape and visual elements of the ES. The recommendations of their report led to a request from HDC for additional work in relation to effects on local views, effects on Stanford Park and effects on the setting of Stormsworth DMV. Additional photomontages were prepared and forwarded to HDC.
38. The photomontages, wireframes and Zones of Theoretical Visibility (ZTV) are considered by Nuon and HDC to be presented in accordance with best practice. These illustrations are tools in the assessment process, which I have supplemented by assessment in the field.<sup>50</sup>
39. An agreed list of schemes within 60 km is annexed to the SoCG, with those schemes forming part of the cumulative baseline highlighted.<sup>51</sup> The updated cumulative landscape and visual assessment focuses on operational and consented schemes, and submitted applications. Proposals at scoping were not considered, with the exception of Lilbourne wind farm, which is located within 5 km of the proposed wind farm at Swinford.<sup>52</sup>
40. At a sub-regional level, a report commissioned from IT Power in 2008 by the local authorities of Hinckley & Bosworth Borough Council, Rutland County Council, Blaby District Council, Oadby and Wigston Borough Council, North West Leicestershire District Council, HDC and Melton Borough Council, considered the potential for RE within the district council areas. It concluded that Harborough District had the greatest potential of all of the districts considered by the study for large-scale wind development. The recommended target for HDC was 24 MW by 2026.<sup>53</sup> This also identified a 'potential wind site' to the west of South Kilworth.<sup>54</sup>

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<sup>47</sup> SoCG Document N10 paragraphs 15.1-15.5.

<sup>48</sup> Document N2.1 paragraphs 4.3.9-4.3.11.

<sup>49</sup> Document CD23.

<sup>50</sup> SoCG Document N10 paragraphs 10.4-10.7.

<sup>51</sup> See also Document N(LV)18 Fig.4.

<sup>52</sup> SoCG Document N10 paragraphs 11.1-11.2, and N(LV)18 CZTV and photomontages.

<sup>53</sup> *Renewable Energy Opportunities* SoCG Document N10 paragraphs 13.2 and 13.3. Also Document N(P)5 page 18.

<sup>54</sup> Indicated as 'W2' in Document N(P)5a. N(P)5 Table 7 refers to this site as 'Hovel Hill' and comments that the site is 2 km from South Kilworth and offers quite a large area for wind turbines suitable for 3-4 turbines. See also Document ID8.

## Format of the Report

41. This report next considers the gist of cases for:

- Nuon UK Ltd (Nuon).
- Pro Wind Alliance (ProWA) and individuals who support the proposed development.
- Harborough District Council (HDC).
- Stop Swinford Wind Farm Action Group (SSWFAG).

42. Other written representations are then reported. Following consideration of conditions which might be imposed were the SoS to decide to permit the proposed development, I turn finally to my conclusions and recommendations.

## The Case for Nuon UK Ltd

The main points are as follows.<sup>55</sup>

### *ES and alternatives*<sup>56</sup>

43. HDC advances a legally based point concerning the ES.<sup>57</sup> Article 5(3) of the European EIA Directive (as amended) requires an outline of the main alternatives studied by the developer and an indication of the main reasons for his choice, taking into account the environmental effects.<sup>58</sup> HDC asserts that the purpose of the amendment was to cause developers to consider alternative developments, embracing alternative sites, designs and layouts. This cannot be reconciled with what the Directive actually says, and HDC concedes that domestic law is against its submission.<sup>59</sup> In any event, Nuon has identified the design/layout evolution of the scheme and the underlying rationale.<sup>60</sup> Even were there a free-standing legal requirement to consider alternative sites, which there is not, such a requirement could only apply where, as a matter of fact, alternatives were both possible and existed.
44. PPS22 deals with minimisation of impacts and does not have the effect for which HDC apparently argues, namely a requirement to consider 'alternatives' in terms of scale, arrangement, siting or sites. Having regard to the unconstrained nature of the need, no one RE scheme can be regarded as an alternative to another. Nor is there any requirement to provide a menu of different layouts, designs, size or number of turbines etc. There is no requirement to consider alternative

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<sup>55</sup> Based on closing submissions [Document N26].

<sup>56</sup> *Ibid* Addendum Re 'Alternatives'.

<sup>57</sup> PoE7.3 Appendix 4.

<sup>58</sup> Directive 85/337/EEC as amended by Directives 97/11/EC and 2003/35/EC.

<sup>59</sup> *R v SSETR ex p Challenger* [Document H2].

<sup>60</sup> Document N15.2 outlines design iterations, including; alterations to increase separation from the gas pipeline, transmission line and water courses; to provide a one field 'buffer' to the SAM; relocation to meet noise guidelines; and reduction to 11 turbines to reduce the large spread of the wind farm and revised layout to make the most efficient use of land and to present a balanced, cohesive design from residential receptors, local road users and recreational receptors. Document N23 is an extract from a draft ES showing the position of the then proposed 18 turbines.

locations.<sup>61</sup> Even were it the case that smaller or fewer or differently laid-out turbines might have a lesser impact, that is not a reason for refusal; the test is not whether, following the various design iterations, the appeal scheme has adverse effects but rather whether, on this scheme, any such remaining adverse effects would be outweighed by the benefits.

#### *Landscape and visual impacts*

45. No objection is taken by HDC, or by any other statutory body, in respect of landscape impact, visual impact or residential amenity. SSWFAG's landscape expert asserts a moderate adverse impact on the local landscape character, but with respect to visual impact and residential amenity found neither to be materially adverse, notwithstanding the lay evidence of other witnesses for SSWFAG. The site lies outside that part of the district which HDC identified as being an APAC. CPRE has adopted a constructive and positive note in its written representation about the application.<sup>62</sup>
46. Public perceptions of wind turbines vary from person to person and display a marked polarity. PPS22 recognizes that, of all renewable technologies, wind turbines are likely to have the greatest visual and landscape effects.<sup>63</sup> That the turbines would be visible is not a reason for refusal. The countryside should be protected for its own sake, but nothing would here adversely affect the overall integrity of any LCA or the countryside generally; that is the appropriate test. Simply to ask whether there would be adverse effects would be too stringent and wrong (almost any built development may have some adverse visual/landscape effects). Any effects here would also be reversible.
47. SSWFAG's landscape evidence does not consider the effects of climate change on the landscape, the temporal element of impacts or that personal views are polarised. In assessing landscape impact, it is common ground that consideration is given to the relevant LCA and its key characteristics. SSWFAG lists the key characteristics of the various LCAs, but does not identify which, if any, would be changed were the appeal scheme to proceed. The only assertion by SSWFAG is one of moderate adverse impact on the character of the local landscape (emphasis added).<sup>64</sup> No assertion is advanced of any adverse impact on any LCA. This concurs with the appellant's view that there would be localised, significant effects on the Laughton Hills and Lutterworth Lowlands LCAs, but no significant effects on the LCAs as a whole.<sup>65</sup> Nuon considers that the wind farm would be a defining feature in the landscape within a limited area, and a dominant feature of the site itself, and would be a prominent feature affecting local landscape character up to approximately 2-2.5 km from the turbines.<sup>66</sup>

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<sup>61</sup> See *Carsington* judgment at paragraph 37 [Document N19]. Lord Justice Carnwath re principle 1(viii) PPS22 accepted that "careful consideration of location" may be said to imply a need for the developer to be able to demonstrate the particular merits of the selected site, but that it was far from requiring the decision-maker in every case to review potential alternatives as a matter of obligation.

<sup>62</sup> Document N3 – Committee Report at page 11.

<sup>63</sup> PPS22 paragraph 20.

<sup>64</sup> Ms Bolger PoE8.1 paragraph 1.3.1.

<sup>65</sup> Mr van Grieken PoE4.1 paragraph 12.2.

<sup>66</sup> Mr van Grieken PoE4.2 paragraph 16. [*Inspector's note - In answer to my question the 'limited area' was stated to be the appeal site as edged in red on the application plans.*]

48. The potential effects on views from various viewpoints are documented in the ES.<sup>67</sup> Significant visual effects would occur on views from Walcote Road (Walcote to Swinford, both directions), Rugby Road/Kilworth Road (South Kilworth to Swinford, both directions), and Lutterworth Road/Swinford Road (Walcote to Swinford, both directions).<sup>68</sup> Assigning a high sensitivity to users of PRow, it is considered that the scheme would have a significant effect on views from six PRows. Residential viewers were also assigned a high sensitivity, and significant effects on views were determined in 44 locations out of the 63 assessed.<sup>69</sup> However, a different and more stringent test applies to the narrower concept of residential visual amenity.<sup>70</sup> There is nothing here which amounts to an adverse impact in terms of the relevant test. The cross-section from Poplar's Farm, one of the closest residential properties to the turbines, indicates that the combination of distance and scale mean that the turbines would not be caught by the relevant test.<sup>71</sup>
49. An updated cumulative landscape and visual impact assessment was submitted to the Inquiry.<sup>72</sup> If the Yelvertoft (submitted application) and Lilbourne (at scoping stage) schemes were constructed then significant cumulative effects with the appeal proposal are predicted from Swinford and some other view points. However, no professional witness for any party asserts an adverse landscape/visual cumulative impact as a reason for refusal. Even were there potential for such impact that would not constitute a reason to reject the appeal scheme. Were it otherwise, the first schemes through the planning system would invariably be at risk; and in circumstances where their existence, at whatever stage in the planning process, might well be used to found an objection in due course to some later scheme when that other scheme itself came to be considered. Whether viewed in isolation or in combination with any other scheme, there is no landscape and visual (or residential visual amenity) reason for refusing this proposal.
50. The scheme is acceptable in respect of landscape and visual impact. Even were there, however, some material objection, that would still be something to be weighed in the overall planning balance, and in circumstances where this scheme carries with it material landscape benefits in terms of the RE response to climate change.

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<sup>67</sup> Document N2.1 Table 6.11 page 6-84. [*Inspector's note - but higher sensitivities were assigned in later work submitted to the Inquiry.*]

<sup>68</sup> Document N2.2 Viewpoints 1 and 2 are from the edge of Swinford, Viewpoint 7 just south of Walcote, and Viewpoint 5 just south-west of South Kilworth.

<sup>69</sup> Mr van Grieken PoE4.1 paragraphs 12.5-12.7 and Document N(LV)18 Fig.3.

<sup>70</sup> Document S(A)4 paragraph 66.

<sup>71</sup> Document N14. The wireframe for this property is No.33 in Document N2.3.

<sup>72</sup> Mr van Grieken PoE4.1 Section 11 and Table 11.2. See N(LV)18 Fig.15a-i.

### *Cultural heritage*<sup>73</sup>

51. With the withdrawal of the third putative refusal for reason (buried archaeology), the only live issues, so far as concern EH and HDC, relate to the settings of three features, namely Stanford Hall, the RHPG and the DMV. LCC accepts that the impact on the historic landscape character is not a reason for refusal.<sup>74</sup> Similarly, HDC does not object on this basis.
52. The views of HDC's Conservation Officer are instructive.<sup>75</sup> EH accepts that the immediate setting of Stanford Hall and its approach are unlikely to be affected by this proposal.<sup>76</sup> It only asserts potential, rather than actual, impact on the setting of Stormsworth SAM.<sup>77</sup> England is a country where the density of cultural heritage features makes it all but impossible for any wind farm to avoid visibility from and proximity to a number of such assets. The remarkable thing about the appeal scheme is not that there is a cultural heritage objection, but rather that the objection is of such comparatively limited compass.
53. Even assuming here a materially adverse effect on a relevant interest feature, this does not require automatic refusal. The matter is one of balance (including consideration of need), having regard to; the development proposed being temporary and reversible; the importance of RE, and the weight to be attached to the benefits is expressly provided for; and those benefits extend to the cultural built heritage.<sup>78</sup>
54. Nuon considers the setting of Stanford Hall and the RHPG to be as indicated on Fig.28 of Document N(LV)18.<sup>79</sup> HDC distinguishes between a two-dimensional and a three-dimensional setting, with the latter including the skyline. So far as concerns the former, HDC accepts that no turbines would fall within the setting of either Stanford Hall or the DMV and therefore, unless the SoS accepts the skyline point, no tenable objection in terms of impact of either of those two settings would arise because the turbines would then all be outwith the setting. HDC puts the setting on the north side of the RHPG at up to 500 m beyond the boundary of the registered area. Ignoring the skyline point, only WT6 and WT9 would then fall within the park's setting. Any such intrusion, even assuming HDC were to be correct in all other respects save for the skyline point, is too little to justify a conclusion of materially adverse impact on the relevant setting.

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<sup>73</sup> [Inspector's note - In answer to my question, it was clarified that cultural heritage falls within the ambit of 'environmental and social impacts' for the purposes of applying Key Principle 1(viii) of PPS22. This states that development proposals should demonstrate any environmental, economic and social benefits as well as how any environmental and social impacts have been minimised through careful consideration of location, scale, design and other measures.]

<sup>74</sup> PoE2.3 Appendix 2.2, first paragraph of e-mail of 25.02.09.

<sup>75</sup> The officer considered that no objection was justified on the grounds of visual impact on Stanford Hall, over two kilometres away, nor on its impact on the Parkland whose avenues converge on the Hall. No objection was raised to wind turbines in an area adjacent to, but some hundreds of metres away from the site of the DMV. HDC Report to Committee, Document N3 page 16.

<sup>76</sup> PoE1.3 EH letter of 8.10.07, page 116 of the Appendices.

<sup>77</sup> *Ibid* EH letter of 9.03.09, page 129 of the Appendices.

<sup>78</sup> PPS22 paragraph 20.

<sup>79</sup> See also Document H3, which shows the boundary of the RHPG.

55. PPG15 refers to 'skyline', but it provides that a high development might also affect the setting of a listed building some distance away or alter views of a historic skyline (emphasis added).<sup>80</sup> In using "or" the PPG identifies historic skylines as something different from, rather than being part of, the approach to setting. The reference is not to just any skyline, but only to "historic" ones. HDC has not justified why the relevant skylines here fall to be viewed as historic.
56. In EH's *Conservation Principles* the definition of setting refers to the extent to which material change within [that setting] could affect (enhance or diminish) the place's significance (emphasis added).<sup>81</sup> The visual envelope cannot be taken as defining the setting because the underlying rationale is the protection of the historic significance of the asset, a necessarily different, and here materially more limiting, concept. Any suggestion that mere (inter)visibility extends the setting is absurd. If the correct approach is to development within the setting, it must follow that no adverse impact can arise in respect of Stanford Hall or the DMV. So far as concerns the RHPG, no adverse effect can flow if the appellant's drawing of the setting is correct. Even the two turbines, at the very extremity of HDC's setting, cannot sensibly be considered to have any materially adverse impact on the RHPG.
57. The concept of setting for the DMV applies only to visible remains, which here appears as a collection of humps and bumps. There must be a very real question as to the validity or applicability of any idea of setting for the DMV. It is only to the south that any concept of setting for the DMV could conceivably extend beyond the SAM's own boundary.<sup>82</sup> On any rational basis, there can be no materially adverse impact.
58. Neither HDC nor EH suggests any cumulative cultural heritage component. SSWFAG suggests the possibility of some other and less harmful proposal coming forward.<sup>83</sup> This ignores the lack of relevance of any concept of 'alternatives'.<sup>84</sup>
59. The benefits of RE for the historic environment is a material consideration, which is not just something to be weighed in the overall planning balance, but an important element of any historic environment impact appraisal. EH supports RE precisely because it unlocks benefits for heritage, and such benefits are needed.
60. EH advises that reversibility is a fundamental objective.<sup>85</sup> An unacceptable development cannot be made acceptable by limiting the duration of planning permission. But for a proposal for which there is an accepted and justified need, and which is in its nature temporary, the fact that any adverse impact would be of limited duration, as a necessary by-product of the underlying nature of the proposal, is a most material consideration. This has particular resonance in terms of cultural heritage, where consideration of the issues looks back over centuries and well into the future. Furthermore, the integrity of the cultural heritage is fundamental and the fact that any intrusion, besides being indirect, is also wholly reversible, is of central importance.

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<sup>80</sup> PPG15 paragraph 2.17.

<sup>81</sup> Document N(CA)6 paragraph 76.

<sup>82</sup> Mr Bourn PoE2.1 paragraphs 5.4-5.11.

<sup>83</sup> Ms Bolger PoE8.1 section 6.3.

<sup>84</sup> Dr Edis PoE1.1 paragraph 6.11 and Mr Bourn PoE2.1 paragraph 5.21.

<sup>85</sup> Document N(CA)4 pages 3, 9 and 12 (final but unnumbered page); N(CA)6 paragraph 100 stresses the desirability of changes being capable of being reversed.

61. EH's Living Draft *Practice Guide* and *PPS15 Consultation Draft* are material considerations.<sup>86</sup> Any weight attached to them must take account of the fact that both are very recent and thus presumably closer to the Government's and EH's present thinking, but as yet only in draft and thus open to further change. Policy HE11 of Draft PPS15 is important in expressly stating that, where considering a development proposal that does not preserve an asset's setting, decision makers should weigh any loss of enhancement of the asset against the wider benefits of the application. Reflecting the importance the Government attaches to development that contributes to the wider principles of sustainable development, such benefits may include wider benefits associated with increased production of energy from low or zero-carbon source. The greater the negative impact on the significance of the asset, the greater the benefits that will be needed to justify approval. Draft Policy HE9.7 provides general guidance on applications affecting historic assets, and stresses the need to concentrate on historic significance, thus going beyond the simple (and simplistic) question of (inter)visibility.
62. EH's Draft, in considering setting, refers to the addition of permanent visual intrusion (emphasis added). The express concentration on the permanent, and ignoring of the temporary or reversible, is of some importance here. It also concentrates on the assessment of impact within the setting (emphasis added).
63. It does not matter here whether the approach is to consider only proposals within the setting, or to look at them outwith the setting as well; the result remains the same. Were the SoS to take a different view, any adverse impact would fall to be weighed in the planning balance against the need for the scheme and its benefits, matters to which significant weight attaches; and that weight is the greater because the benefits, in terms of responding to climate change, include benefits which are cultural-heritage specific. This is recognized and acknowledged in all the relevant guidance, and emphasised in the very recent draft PPS15 and emerging EH draft.

#### *Noise*

64. There is no objection from the relevant local environmental health authority. This is important given the points raised by others. As regards construction noise (and as noted in PPG24) sections 60 and 61 of the Control of Pollution Act 1974 are available. This affords a complete and separate statutory control mechanism. Nuon and HDC concur that the acceptable limits for wind turbine operation noise are set out in ETSU.<sup>87</sup> They consider, therefore, that the test for operational noise is whether or not the calculated wind farm noise levels at receptor properties lie below the noise limits derived in accordance with ETSU.<sup>88</sup>
65. Wind shear has been appropriately and properly dealt with. SSWFAG accepts that the ETSU noise limits are the appropriate test to apply, subject only to its points about amplitude modulation of aerodynamic noise (AM) and background noise levels.

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<sup>86</sup> Documents ID5.1 and ID5.2.

<sup>87</sup> Document N(N)1. [*Inspector's note - PPS22 provides that RE developments should be located and designed in such a way so as to minimise increases in ambient noise levels. It states that ETSU should be used to assess and rate noise from wind energy development. PPS22CG endorses the recommendations in ETSU as relevant guidance on good practice.*]

<sup>88</sup> SoCG Document N10 paragraph 12.1.

66. The ETSU night-time limit correlates well with the World Health Organisation (WHO) night time guideline level for the avoidance of sleep disturbance.<sup>89</sup> The background noise measurement locations were all agreed with HDC's Environmental Health Officer (EHO).<sup>90</sup> The EHO was satisfied as to the number and location of measurement points. Furthermore, the EHO agrees the figures inserted into the draft noise conditions, and by so doing, confirms acceptance of the levels upon which these are based.
67. So far as concerns Swinford, a conservative approach was taken because measurements were taken at Penfoland, which is significantly further away from the M1 motorway, and less affected by noise, than the village itself. At South Kilworth, turbine noise would be well below the level at which background measurements are required, and a flat 35 dBA level would be achievable.<sup>91</sup> So far as concerns time of year when measurements were taken, the absence of leaves on deciduous trees in winter further reduces the scope for foliage noise and, again, represents a conservative approach.
68. This is not a site likely to give rise to a risk of AM.<sup>92</sup> ETSU itself takes account of AM.<sup>93</sup> Even if one ignores ETSU's reference to 6 dBA of AM and concentrates on 3 dBA, that represents an appropriate allowance; and it would take of the order of a 3 dBA increase above that to be perceptible.<sup>94</sup> The Salford Report confirms the very limited occasions where AM might have occurred at other wind farms.<sup>95</sup> The Government has expressly reviewed matters, confirming that it does not consider further work is required and has reiterated that ETSU should continue to be used.<sup>96</sup> There is, in any event, here proposed an agreed condition which would deal with AM, even were it to arise.
69. The existing noise levels at the local school are 50 dBA  $L_{A90}$  with predicted turbine noise being 35 dBA  $L_{Aeq}$ ; the latter figure meets WHO criterion.<sup>97</sup> No sustainable noise objection arises.
70. There can be no serious criticism of the ETSU noise limits. The Government has correctly continued to endorse the use of ETSU in these circumstances.<sup>98</sup> This is an ideal wind farm site in noise terms because of the considerable level of protection and comfort afforded by the substantial 'headroom' between the predicted noise levels and the derived ETSU limits.<sup>99</sup> SSWFAG asserts a need for

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<sup>89</sup> Document S(N)13 pages 46, 61 and 65; a 45 dBA  $L_{Aeq}$  effectively equates to ETSU's 43 dBA  $L_{90}$  - WHO consider that this allows for a partially open window and affords an outside to inside reduction of 15 dBA to achieve a satisfactory internal level of 30 dBA. It is moreover important to note that WHO guideline levels are designed to set a level below which adverse health impacts will not occur (see page 56, first full paragraph), and in any event, WHO estimates that 80-90% of reported cases of sleep disturbance are for reasons other than noise originating outdoors (WHO page 44, first paragraph of section 3.4).

<sup>90</sup> Document N2.1 paragraphs 7.2.5 and 7.7.13.

<sup>91</sup> See Document N(N)1 – ETSU Executive Summary at point 25.

<sup>92</sup> Dr McKenzie PoE5 paragraphs 7.7-7.10.

<sup>93</sup> Document N(N)1 pages 12 and 68.

<sup>94</sup> PPG24 – Glossary under *dB(A)*.

<sup>95</sup> Document N(N)5 Section 7.

<sup>96</sup> Document N(N)2.

<sup>97</sup> Document S(N)13 page 65.

<sup>98</sup> See also SoCG N10 at paragraph 12.1.

<sup>99</sup> Document N2.1 Tables 7.8 and 7.9.

a 1.5 km separation distance. This cannot be supported. It massively exceeds what would be necessary here to meet the appropriate ETSU criteria.

### *Noise and health*

71. The ETSU limits properly reflect WHO guideline levels and provided these were met no health concerns would remain. SSWFAG produced an extensive and cross-referenced proof with many supporting documents.<sup>100</sup> However, this analysis has material flaws and Nuon submits that it has little weight for present purposes. It is effectively no more than a literature review, with much of that literature assembled from an internet trawl. It does not refer to WHO Guidelines.
72. SSWFAG cite extensively from the recent Final Report of WINDFARMperception.<sup>101</sup> However, it misquoted the number of responses to the study being reported. Some 2000 people were consulted, of whom 725 replied; this is of relevance in that out of the 2000 people to whom the question was posed (and the 752 who responded) only 244 identified a noise source which had interrupted their sleep and of these road traffic had 93 mentions, as against only 36 for wind turbines.<sup>102</sup> This is hardly statistically significant. The bulk of the report related either to visual perception (rather than noise) and to people's perceptions of turbine noise when they were outdoors. Only a small part of the study concerned sleep disturbance.<sup>103</sup> There are technical deficiencies in the analysis and it does not explain or justify its results in the context of WHO Guidelines.
73. SSWFAG produces a Table alleging support for stand-off distances.<sup>104</sup> This should be treated with some caution. For instance, the French Academy of Medicine paper is unsupported by any proper detailed consideration of actual noise levels, and the table also omits reference to the directly contrary view of Affset, which is a public administrative establishment of the French State.<sup>105</sup>
74. The Thackson's Well Farm decision includes an extensive passage expressly headed "Health and the precautionary principle", which considered virtually the same arguments and documents now advanced by SSWFAG.<sup>106</sup> The Inspector in that case found nothing in the evidence or circumstances on which to base a rational health fear sufficient to justify either the refusal of permission or to seek greater separation between houses and turbines than is required to secure compliance with ETSU.<sup>107</sup> There is nothing to indicate that anything has changed since this decision. Nuon submits that the same conclusion must follow here.

### *Shadow flicker*

75. Potential for shadow flicker cannot arise at any property beyond ten rotor diameters nor can it affect any closer property unless it is within 130 degrees

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<sup>100</sup> Documents S(S)1-46.

<sup>101</sup> Document S(N)14 and Dr Hanning PoE11 section 3.3.

<sup>102</sup> Document S(N)14 page 54.

<sup>103</sup> *Ibid* page 53, Fig 7.3.

<sup>104</sup> Dr Hanning PoE11 Table 1 page 36.

<sup>105</sup> Dr McKenzie PoE5 paragraph 8.5 and Appendix 11.

<sup>106</sup> Document N(P)24 paragraphs 17-23, pages 7 to 10.

<sup>107</sup> *Ibid* paragraph 23.

either side of north relative to the turbines.<sup>108</sup> It only occurs within buildings and is further dependent upon the existence of a suitably orientated, narrow window, and is weather dependent. The ES has predicted shadow flicker on a worst-case basis.<sup>109</sup> HDC accepts that this is a matter for appropriate control through condition.<sup>110</sup> Modern turbines rotate at speeds well below the relevant threshold criteria for adverse impact from flicker, even in the case of those potentially most sensitive.<sup>111</sup>

#### *Archaeological considerations*

76. A detailed gradiometer survey was conducted across targeted areas on the appeal site. This detected a number of anomalies of possible archaeological potential.<sup>112</sup> LCC's Senior Planning Archaeologist indicated that, notwithstanding identification of archaeological remains within the appeal site, a conditioned approach would be acceptable. Trial trenching would be necessary as a preamble to the design of an appropriate mitigation strategy, but the scheme could accommodate some variation in layout.<sup>113</sup>

#### *Other issues*

77. There are no live issues concerning nature conservation, but a technical response has been submitted.<sup>114</sup> Assessments considered protected species and other wildlife, along with cumulative impact. The effects of the proposal were assessed as not significant, with minor negative effects during construction minimised by means of appropriate conditions. Submissions by those concerned about the effects of turbines on horses reflect over-cautious anticipation rather than actuality. Horses can co-exist with turbines as is shown by photographs of an area of a wind farm being used for equine competition.<sup>115</sup> Even if the turbines were to limit to some extent equestrian use of bridleways and roads in the immediate environs of the proposed wind farm, this would be a matter to weigh in the balance rather than a reason for refusal. No unacceptable effects on rights of way generally would arise. Concerns regarding the safety of wind turbines, given the proximity of the gas pipeline and power lines, do not take into account that a system to detect asymmetric blade loads and to shut down turbines would be installed. This would deal with icing, and blade/hub distortion through fire or lightning strike. Risk can rarely, if ever, be wholly eliminated, but here must be miniscule. National Grid operates under a statutory regime which includes duties

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<sup>108</sup> PPS22CG pages 176-7; it is also important to distinguish shadow flicker as a scientific phenomenon from the simple casting of shadows – see Langdon Decision, N(P)28 at paragraph 60.

<sup>109</sup> 10 dwellings within 900 m were modelled, of which 5 would experience no shadow flicker, others would receive, at most, a minimal duration of effect. Document N2.1 section 15.

<sup>110</sup> SoCG N10 paragraphs 17.1 and 17.2.

<sup>111</sup> PPS22CG page 177 paragraph 77.

<sup>112</sup> Document PoE2.3 Appendix 3.

<sup>113</sup> *Ibid* Appendix 2.5.

<sup>114</sup> Document WS1. References and relevant correspondence is included at Documents N(E)1-13.

<sup>115</sup> Mr Kenyon PoE3.1 Appendix B. [*Inspector's note – it was clarified at the Inquiry that these representations are not specific to the appeal proposal and concern a wind farm at Delabole. Nonetheless, the photograph depicts an equestrian event taking place in what appears to me to be considerably less than the separation distance recommended by the British Horse Society (BHS).*]

relevant to safety. Neither it, nor the Health and Safety Executive, has objected to the proposal. Safety during construction and operation is the subject of rigorous control.<sup>116</sup>

### *Benefits, needs and targets*

78. Relevant policy for RE inter-relates with various domestic and international legal obligations and cascades down from international through European, national and regional to the local level. The Annex to the EU Directive identifies various overall targets for Member States (2020) for the percentage share from renewable sources in final energy consumption.<sup>117</sup> The UK figure is set at 15%. Yet there is no sign of meeting even the earlier 2010 target of 10%. The very recent UK *Renewable Energy Strategy* aspires to achieving a UK figure of 30% electricity generated from renewable sources.<sup>118</sup> The fact that the need for RE sounds at the supranational level is crucial. It means that, in drawing any planning balance, considerable weight is to be attached to bringing forward any relevant RE project. Thus there must be an imperative and overriding reason for refusing a project. The mere fact that there may be impacts, even at the national level, which some argue to be adverse is not, of itself, sufficient to weigh the balance negatively.
79. The 2010 target has still not been met and, far from becoming irrelevant after 2010, will become yet more urgent as long as it remains unmet. Even were one to ignore the regional targets, RSS8 Policy expressly directs consideration to national and international climate change objectives; the mismatch in the UK between renewables provision and need is a most material contributor to the bringing forward of schemes such as the appeal scheme.<sup>119</sup>
80. The weight to be attached to the benefits of RE development is, unusually, not a matter which is left to the decision-maker to determine, but provided for expressly by national policy.<sup>120</sup> Where policies in other PPSs (and, logically, elsewhere) differ in emphasis from those in PPS1supp, the latter prevails.<sup>121</sup> Thus national policy itself imposes a hierarchy in considering the various policy aspects.

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<sup>116</sup> Including through BS EN 61400-1:1995 *Wind turbine generator systems – safety requirements* Document N2.1 paragraphs 14.5.15 to 14.5.19 and Table 14-2.

<sup>117</sup> Document N(P)12.

<sup>118</sup> Document N20 – Exec Summary page 8; it further refers to swifter delivery (page 14 and following), and acknowledges that the UK consenting process does not run as smoothly as it could (page 88).

<sup>119</sup> PPS1supp paragraph 16 indicates that strategic targets for renewable energy should not be applied directly to individual planning applications. The *Carsington* Inspector [N(P)29] robustly rejected any suggestion that this meant he must ignore regional targets and that approach was equally robustly endorsed by Carnwath LJ in the subsequent, unsuccessful High Court challenge by the LPA – see the *Carsington* judgment [N19] at paragraphs 38 to 42.

<sup>120</sup> PPS22 paragraph 1(iv) provides that the wider environmental and economic benefits of all proposals for renewable energy projects, whatever their scale, are material considerations that should be given significant weight in determining whether proposals should be granted planning permission. (emphasis added)

<sup>121</sup> PPS1supp page 1.

*PPS22*

81. PPS22 embodies an important recognition of the fact that any specified RE targets are minima; the prescribed target figures are to be expressed as the minimum amount of installed capacity to be achieved.<sup>122</sup> PPS22 also confirms that targets should be reviewed upwards (if met, and subject to the stated criteria), and the fact of a target having been reached should not be used in itself as a reason for refusing consent. This accords with (inter)national recognition that the world effectively needs as much RE as it can get. The need is thus unconstrained. Renewable generation needs to be brought forward wherever it can be, subject to its being acceptable when the overall balance is properly drawn.
82. Objectors refer to the use of the word 'minimise' in policy, but largely ignore references to maximising provision of RE. Paragraph 19 of PPS22 mentions minimisation of a scheme's impact, and directs that minimisation of effects is something LPAs must address in development plans. Thus any minimisation requirement is that to be found in the development plan. Minimisation refers to a scheme's impacts and does not require that a scheme continue to be reduced beyond the point at which a positive planning balance is achieved. Whilst a reduction in number and/or height of turbines as here suggested by HDC might, or might not, make a material difference to any residual impacts, that has no relevance for present purposes.<sup>123</sup> The appeal scheme is consistent with PPS22.
83. There is a clear imperative behind allowing this project to proceed unless one of the matters raised by way of objection is so significant as wholly to nullify that strong presumption. Renewables are being brought forward in order to counter adverse changes to the landscape (including cultural heritage) and ecology. Thus the precautionary principle here operates to bring forward projects such as this; it does not operate to frustrate such development, and it expressly recognises that the judgement is one of appropriate balance, not a requirement for absolute certainty.

*Energy White Paper - Meeting the Energy Challenge*

84. The White Paper provides that renewables are key to the strategy to tackle climate change and deploy cleaner sources of energy. The target aims to see renewables grow as a proportion of electricity supplies to 10% in 2010, with an aspiration for this level to double to 2020. It adds that new renewable projects may not always appear to convey any particular local benefit, but they provide crucial national benefits. Individual renewable projects are part of a growing proportion of low-carbon generation that provides benefits shared by all communities both through reduced emissions and more diverse supplies of energy, which helps the reliability of our supplies. This factor is a material consideration to which all participants in the planning system should give significant weight when considering renewable proposals.<sup>124</sup>

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<sup>122</sup> PPS22 paragraph 3.

<sup>123</sup> See for example the various ZTVs in the ES. The hub-height ZTVs can be used as a proxy for turbines at 80 m to blade tip and then compared with the blade-tip ZTVs showing 125 m. There would be even less material difference between the 100 m high turbines which HDC suggests, and with whose impact it appears content.

<sup>124</sup> Document N(P)8 Box 5.3.3 page 157.

85. The strategic importance of access to energy supplies which avoid the state and its citizens being held to ransom is self-evident but, surprisingly, often ignored. Here objectors advance reasons why, in essentially local terms, the scheme should be refused. Nuon's case is that the impacts of the proposal would not be unacceptable, but even if this was wrong, any adverse impact would still need to be weighed against the wider regional, national and global imperative. The White Paper further confirms the materiality of the *Stern Report* as one of the economic considerations to which PPS22 attaches significant weight.<sup>125</sup> The requirement for early action to minimise cost is another significant factor in favour of schemes that are at an advanced stage, which has been ignored by HDC.

#### *Development plan*

86. The proposal accords with the development plan properly construed. But even if both the policies cited by HDC in its putative reasons for refusal; namely, what is now RSS8 Policy 26 and LP Policy EV/16 were not only breached, but also breached in such a way as to amount to a failure to accord with the development plan as a whole, the other material considerations already identified militate decisively in favour of granting permission. With respect to RSS8 Policies 1, 26 and 40, almost any proposal can reveal 'tensions' between various policies. It is necessary to read the development plan as a whole and to determine whether the proposal accords with what may be termed the dominant theme or policy so revealed.
87. References to protecting/enhancing historic and landscape assets are of fundamental importance. But it is equally fundamental to apply these injunctions fully and not partially. Far more of a threat to (inter)national landscape and cultural heritage comes from the continuing deleterious effects of climate change than from any local (and almost invariably reversible) impacts of wind energy schemes.
88. Policy expressly distinguishes development that is reversible from that which involves irreversible<sup>126</sup> or irreplaceable<sup>127</sup> damage. This is not a case of some locally objectionable proposal, without any public benefit, being argued to be tolerable if only permitted for a few years. Wind farms by their nature have a finite life. The fact that any impact is comparatively short-lived (the more so when considered against the life of many cultural heritage features) is a most material consideration. It is understandable that those who dislike wind energy projects should point to twenty five years being of the order of a generation.<sup>128</sup> But climate change is too urgent to ignore further.
89. The proposal accords with the development plan. In any event, the various other material considerations, including the acknowledged need, militate decisively in favour of consent issuing.

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<sup>125</sup> Document N(P)8 paragraph 10.36 page 290.

<sup>126</sup> RSS8 Policy 1(g) at the fourth bullet. [Document CD1]

<sup>127</sup> RSS8 Policy 26 at the third bullet. [Document CD1]

<sup>128</sup> In drafting PPS22 the author must have had a period of 20-25 years in mind when using the word "temporary".

### *Conclusions*

90. If Nuon's witnesses are substantially correct in their evidence and opinions, then no reason for refusing consent arises. Even if on one, more or even all points of objections, the SoS were to prefer the view of those who allege materially adverse impacts, the appeal would still fall to be considered as a matter of balance. This is a carefully, and sensitively, designed scheme which would make a material contribution to the Government's RE targets for the sub-region, the region and the country as a whole, whilst respecting its surroundings.

### **The Cases for Pro Wind Alliance and other supporters**

#### **Grahame Jordan**<sup>129</sup>

91. Sustainable clean electricity is needed to reduce the use of dirty, dangerous and polluting fossil fuels. No other forms of RE generation can match the benefits of wind turbines in this district, as stated in the IT Power report 2008.<sup>130</sup> The appeal site is ideal because it is an upward slope from the lower valley, which contains the M1 Catthorpe intersection. This is a functional corner of Harborough District, which includes major motorways, quarrying, distribution centres, cement works and a large landfill site. Even modern entertainments at Stanford Hall, such as rallies, firework displays and music, add to the noisy congestion. There is little common ground amongst the views of local residents, but a definite need for new renewables to quickly replace aging fossil fuel power plants, and for a new revolution of sustainability.

#### **Keith Warren**<sup>131</sup>

92. Serious interest in wind farms is at an early stage and many more should be built. Opposition to them is comparable to that which occurred with the advent of railways some 200 years ago, where finally, the good of the country was put above rather selfish local interests. Attempts to make Britain less dependent on non-RE sources should be supported. There is a need to act quickly without arguing too much about low-level noise or the appearance of wisps of metal spoiling a fraction of our distant horizon. The biggest threat to the countryside is not wind turbines, but climate change. We are faced by possible large-scale disaster and should not think too locally, and must not let what are really small scale local worries and emotionally-fired sentiments stop action to lessen such prospects. The *Stern Report* is the best scientific advice available.

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<sup>129</sup> Member of Pro Wind Alliance (ProWA), which has a local membership of about two dozen in a regional group. See Document ID2.

<sup>130</sup> Document N(P)5.

<sup>131</sup> A retired consultant, on practical technology education, to the United Nations. See Document ID9.

**Professor John Twidell<sup>132</sup>**

93. Appreciating that energy supply is needed for all forms of life and all economies is vital. We are moving away from fossil fuels and into a future depending on energy technology with minimal chemical emissions. Electricity from wind turbines is used locally. The proposal would generate electricity equal to that used by 11,000 typical households. It would offset local import from polluting power stations, and so would significantly reduce the carbon footprint. The UK has more than sufficient back-up for the variability of output from the proposed wind farm. The appeal scheme would reduce national fossil-fuel use and so increase security of supply and sustainability. If the output of the proposed wind farm were to be sold to 'green suppliers' it would allow consumer payments to be partly re-circulated in the local economy via rental income and maintenance employment. Local authorities would also gain additional rate revenue. The net effect of the wind farm would be to improve the countryside.
94. The Government is obligated under the EU '20/20/20' Directive to have 20% of European total energy from renewable sources by 2020 and to reduce energy consumption likewise by 20%. UK use of renewables is about 5% of total UK energy. The Climate Change Act 2008 provides for an 80% reduction in UK climate change gas emissions by 2050. The White Paper on Energy shows the Government's aims and methodology for increasing RE supplies and other carbon-reduction programmes. The proportion of energy from renewables in the East Midlands is about 1%, significantly less than the UK average, and is mostly from landfill gas. Consultants to the Regional Assembly have recommended at least 310 turbines of about 2.5 MW capacity to be installed, whereas the total now is the 10 at Burton Wold. It is estimated that Harborough District requires between 100 and 150 such turbines within an integrated RE policy. There are none at present.
95. The proposed development is temporary and easily reversible. Historic structures in the wider locality are around 500 years old or older. Any impact for 25 years to meet current national commitments would be negligible, especially regarding the long-term value of the DMV and Stanford Hall. Submissions that the wind turbines would 'overshadow' buildings at a distance of 1.5 km and would 'tower over' a village 1 km away are exaggerated. The angle subtended at a viewing point should be considered. Sound from wind turbines for enthusiasts can be a pleasant sensation. There is confusion in assessing sound at locations outside buildings, and the effects of such sound inside that building. Agricultural use of the site would continue as the site's setting, and would be protected from other development by the proposed wind farm. Seeing all or part of a wind turbine is not itself harmful, because appreciating that they generate clean and local energy is a significant reason for finding them attractive. There is no evidence that EH, HDC or any other opposition to the wind farm have considered the likely future needs and opinions of our grandchildren. Children enjoy seeing

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<sup>132</sup> Visiting lecturer at the University of Reading, Oxford University and City University on renewable energy engineering, policy and economics, co-author of *Renewable Energy Resources*, 2006, and co-editor of *Offshore Wind Power*, 2009. Further details about Professor Twidell's involvement in wind power are set out in Document ID4. Professor Twidell lives in the District and wishes all the electricity he uses to come from non-polluting generation.

and learning about wind farms. Planners should allow for future society being more familiar with wind power.

96. Change in the countryside is ongoing, and the local wind farm would just be another change that would not harm the evidence of previous changes. Stanford Hall balances its heritage with modern uses and activities. It is not all eighteenth century. The proposed wind farm would have local and national benefits, but the major benefit would be, by abating climate change, global.

**Herbert Eppel**<sup>133</sup>

97. There is world, European and national agreement that urgent action is required to tackle climate change. Over 300 local authorities have signed the Nottingham Declaration on Climate Change, acknowledging its far-reaching effects. The UK, which has the greatest potential in Europe for wind power, has clear national and regional RE targets. Wind power was used for centuries in the past, and the efficiency of wind turbines should take into account that the fuel is free and inexhaustible and that there are no waste products. The proposed wind farm would be a symbol on the M1 motorway of an enlightened, forward-looking County. The concern of many people is based on myth and pseudo science, which evokes unnecessary fear in a local community. Some of the information published by those campaigning against the proposal has been discredited by the Advertising Standards Authority.<sup>134</sup> The proposed location has already lost its tranquillity due to the nearby M1 motorway and the A14, and it is important to note that the European landscape is man-made. CPRE does not object to this proposal.

98. The Stormsworth SAM is not something that local people are aware of, or are currently able to enjoy. The wind farm would co-exist in perfect harmony with the SAM. With respect to Stanford Hall, the ES notes that there would be no effect on key vistas and sight lines. The grounds of Stanford Hall accommodate an unsightly caravan park, which does not blend into its surroundings. The wind turbines could 'coexist peacefully' with the historic buildings. EH did not appear at the Inquiry to support its recommendation. Cultural heritage should, in accordance with relevant policy, receive the highest level of protection, but the potential impact of climate change on historical assets must also be considered. Whilst protecting our past, it is important that we also look to safeguard our future.

**The Case for Harborough District Council**

The main points are as follows.<sup>135</sup>

*Introduction*

99. Important features of heritage interest within the appeal site and in its vicinity form the bedrock of HDC's case. The protection of those cultural heritage assets weigh in the planning balance to be drawn in the context of the acknowledged need for RE development and its attendant benefits. No point is taken on

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<sup>133</sup> An energy campaigner and a member of Campaign to Protect Rural England CPRE, urges approval of the wind farm on behalf of ProWA. See Document ID3.

<sup>134</sup> Document N(P)27.

<sup>135</sup> Based on closing submissions – Document H5.

matters (e) and (f) concerning landscape/visual impact and noise, respectively, about which the SoS is informed by means of HDC's detailed committee report.<sup>136</sup>

### *Cultural heritage*

100. Nuon carried out an assessment of impact upon Stanford Hall and its park, and consulted EH on a draft of the ES.<sup>137</sup> As a result of those consultations Nuon instructed other specialist cultural heritage experts to undertake a further appraisal of the setting of the Hall and park.<sup>138</sup> That study fairly recorded the importance and value of Stanford Hall. The manner in which the Hall has been described in a wide variety of publications is testament to its exceptional quality.<sup>139</sup> This is a quite exquisite part of the cultural heritage of this area, and of England. The Hall is of major significance.<sup>140</sup>
101. Its setting is provided by its park and garden, principally by the inner park as is described on the Register. The formal layout of the park included a number of avenues which radiate out from the Hall. These include some long avenues which run to the north and some shorter avenues to the west. All are easily identifiable in the park today.<sup>141</sup> Some of the trees show the effects of age, but this does not reduce the value of the park. The park retains its mid-eighteenth century character and appearance and much of the earlier formal layout.<sup>142</sup> Such character is intended to be maintained as a result of a management agreement between EH and NE on the one part, and the present owner on the other.<sup>143</sup>
102. Stanford Hall park is one of the major tourist attractions in the district, with an average of 45,000 visitors each year. There are also a number of public footpaths and bridleways which cross the park, including the gated roadway, which was confirmed at the Inquiry by the owner to be a publicly accessible route.<sup>144</sup>
103. The importance of both the house and park is substantial. Not only are the assets of considerable intrinsic value, they are of very significant value to those members of the public who have access to them in a wide variety of ways, ranging from motor rallies to firework displays and nature trails.<sup>145</sup>

### *Effects on the setting of Stanford Hall and Park*

104. The setting of the Hall is essential to its character. Nuon has produced material in the ES to illustrate the extent to which the turbines would be visible from within the Hall and park, and its setting. In particular, the ZTVs illustrate the extent of visibility in plan form.<sup>146</sup> At least one turbine hub would be visible

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<sup>136</sup> Document N3 and *Other issues* below.

<sup>137</sup> See letters between Entec and EH in PoE1.3 Appendix 4 and 5.

<sup>138</sup> Document N2.3 Appendix 11C and PoE1.3 Appendix 1.

<sup>139</sup> Various quotations at paragraph 4 of Document H5.

<sup>140</sup> Mr Brown PoE6.1 paragraph 6.15.

<sup>141</sup> Mr Brown PoE6.1 paragraph 6.04.

<sup>142</sup> *Ibid* paragraph 6.08.

<sup>143</sup> Mr Fothergill PoE22 and S(CH)1.

<sup>144</sup> Para 6.11 PoE6.1 and Document N16.

<sup>145</sup> PoE6.2 Appendices 2 and 4.

<sup>146</sup> Document N2.2 Fig.11.4(ii) is ZTV for blades in the vicinity of Stanford Hall with screening effect of trees included.

- from 59% of the RHPG.<sup>147</sup> It is evident from that material that blade tips would be visible across sections of the southern part of Stanford Park and across both the inner and outer park.
105. Wireframes and photomontages in the ES seek to demonstrate how those turbines would be seen above Rookery Wood.<sup>148</sup> Nuon produced further photomontages in June 2009, which indicate the locations at which nacelles or blade tips would be visible above Rookery Wood from locations on the approach to Stanford Hall.<sup>149</sup>
106. Further north in the park, two main areas became the focus of attention at the Inquiry. Firstly, there is the view that would be available to those, including members of the public, from the route over Gravel Hill. The impact of the turbines on those making this journey is demonstrated in the photomontages, which take one firstly up the slope of the hill, and secondly to its brow.<sup>150</sup> In those views it is evident that the turbines would present themselves clearly and visibly to the observer walking directly towards them. They would dominate views for those travelling over Gravel Hill. Views from Hovel Hill, a destination at the end of a planted and designed avenue, would also include the majority of the turbines.
107. The wind farm would significantly alter the character of the views out from the northern half of the park. Such a change would, constitute a seriously adverse impact upon the character of the park. It is primarily the extent of the wind farm, with turbines widely spaced across the northern skyline, which would be so damaging. The scale and extent of the proposed wind farm would dominate the landscape, which is one of the key factors identified by EH.<sup>151</sup> This would be harmful to the general character of the northern half of the park, and seriously harmful to the views north from Hovel Hill and Gravel Hill.<sup>152</sup>
108. HDC has not participated in the debate about the landscape and visual effects of the proposal. It is difficult to entirely disentangle the assessment of visual effects for the purposes of the landscape assessment and an appraisal of the visual effects for the purposes of assessing impact on cultural heritage.<sup>153</sup> The key debate at the Inquiry on cultural heritage issues, has centred upon Nuon's view that the turbines would be outside any relevant setting.
109. PPG15 states that setting is often an essential part of the building's character, especially if a garden or grounds have been laid out to complement its design and function. It advises that a high or bulky building might also affect the setting of a listed building some distance away, or alter views of a historic skyline.<sup>154</sup>

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<sup>147</sup> Mr Brown PoE6.1 paragraph 7.08.

<sup>148</sup> Document N2.2 Figs. 11.4ii, 11.5i, 11.5ii, 11.5iii.

<sup>149</sup> Document N(LV)18 - in particular Fig.26B and Fig.26D.

<sup>150</sup> Document N2.2 Figs.11.5(vi) and 11.5(vii).

<sup>151</sup> Key factors identified by EH in *Wind Energy and the Historic Environment*, Document N(CA)4.

<sup>152</sup> Mr Brown PoE6.1 paragraph 7.15.

<sup>153</sup> The ES Document N2.1 expressly acknowledges this fact by cross referring between Chapters 6 and 11 (page 6-11, last bullet) which deal with these two issues. Table 6.2 (page 6-7) refers to cultural heritage assets in the context of landscape assessment.

<sup>154</sup> PPG15 paragraphs 2.16 and 2.17.

Setting cannot be assessed simply in plan view – it is something to be appreciated in three dimensions.

110. The Institute of Field Archaeologists (IFA) considers that setting is essentially about how the surroundings of an historic asset contribute to its appreciation and understanding. A wide range of natural and cultural features and characteristics can contribute to the setting of a place and it can be changed both by removals and additions of physical features. How significant such physical changes are in harming or enhancing the setting of a place depends on how far they affect the clarity and legibility of historical, functional, design and associative relationships between the asset and its surroundings, which is part of the assets 'special interest'.<sup>155</sup> EH defines 'setting' as an established concept that relates to the surroundings in which a place is experienced, its local context, embracing present and past relationships to the adjacent landscape. Definition of the setting of a significant place will normally be guided by the extent to which material change within it could affect (enhance or diminish) the place's significance.<sup>156</sup>
111. Given that these authoritative documents deal with such flexible concepts as importance and perceptual and historical characteristics, it is plain that the decision maker has considerable latitude in determining setting. Moreover, reference to setting contributing to the appreciation of understanding, and it normally being guided by the extent of material change affecting a place's significance, point to a concept which affords protection from development which exerts its impact over a significant distance. The IFA Review and decision letters from wind farm appeals support this approach.<sup>157</sup>
112. The extensive views and historic associations prompt an assessment from Gravel Hill and Hovel Hill that includes the skyline above the farmland around the RHPG. The setting of the RHPG extends on all sides for 100 m, except to the north, where it extends 500 m beyond Rugby Road, and so on this basis WT6 and WT9 would be within the setting of the RHPG.<sup>158</sup>
113. Similarly, the setting of the Hall is not restricted to a two-dimensional definition of the inner park, but includes the skyline around and above the park. This setting is an essential part of the character of Stanford Hall and is fundamental to an appreciation of its special interest.<sup>159</sup> Nuon takes a restricted and unrealistic view, which, if followed logically, would admit construction of

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<sup>155</sup> *Setting Standards: A Review* (IFA Working Group on the Setting of Heritage Features) Document N(CA)2.

<sup>156</sup> Document N(CA)6.

<sup>157</sup> Document N(P)24 Thackson's Well Farm re: Belton Tower, for example.

<sup>158</sup> EIC Mr Brown. [*Inspector's note – Document N2.2 Figs. 11.5vii and 11.5viii indicate the view from within the RHPG at Gravel Hill. It shows Verney Spinney (with WT8 behind). The wireframe shows WT9 would be located part way down the slope of the ridge that leads up to the Spinney from a shallow valley. The photomontage from Gravel Hill at Fig.22.j Document N(LV)18 shows this view in a different season. The view from the edge of the RHPG at the point where the gated road crosses Rugby Road is shown on Figure 7 of Document N(LV)14. This indicates that WT8 and WT10 would be behind Verney Spinney and the wireframe again shows WT9 would be on land which slopes towards the RHPG. Figs. 11.5ix and 11.5x of Document N2.2 indicate that in the view from Hovel Hill, towards the end of the northern avenue but within the RHPG, WT9 would be sited on the slope facing towards the RHPG and would be seen in front of Verney Spinney.*]

<sup>159</sup> Mr Brown PoE6.1 paragraph 6.16.

125 m high turbines on parts of the park boundary without any possibility of an effect on the setting of the RHPG.

114. Nuon's opinion on setting falls to be assessed in the context of arguing that blades turning above Rookery Wood, viewed from points close to the Hall would not be interfering features on the skyline; and an assessment of the setting of the RHPG as nil in several places.<sup>160</sup>

#### *Effects on Stormsworth SAM*

115. Each and every turbine would present itself in substantial part in views from the SAM.<sup>161</sup> They would be dominant features with a very significant visual impact. The appellant's approach to this issue is to contend that the turbines would not fall within the setting of the DMV.
116. Nuon acknowledges that the setting of the DMV extends beyond its designated boundary to the south, on the basis of the presence of parts of the DMV in that location. Parts of the DMV also extend beyond the northern boundaries of the designated area.<sup>162</sup> Historical associations with the land to the north should also be taken into account. The setting of the SAM, in two dimensions, extends for 200-300 m beyond the scheduled area, but the setting also includes the skyline above the adjacent fields and trees.<sup>163</sup>
117. Regardless of those considerations, there remains the important consideration as to how the viewer of the monument would appreciate its historical significance without the proposed turbines, or with them. Such an appreciation would be significantly harmed because it would not be possible to shut out of mind the eleven nearby turbines and their rotating blades.<sup>164</sup>
118. In summary, if the turbines, as a matter of fact and degree, fall outside the setting of the DMV then the appellant succeeds on the point. If not, then there is significant and highly damaging impact upon the setting of the SAM, which is provided with significant protection via PPG16.

#### *Benefits and need*

119. HDC's Committee Report notes that the Energy White Papers of 2003 and 2007 provide the broad context for planning policies concerned with RE. These state that renewables are key to the Government's strategy to tackle climate change and deploy cleaner sources of energy. It has a target that aims to see renewables grow as a proportion of the UK's electricity supplies to 10% by 2010, with an aspiration for this level to double by 2020.<sup>165</sup> Nobody at the Inquiry contends that the appeal proposal does not attract significant weight by reason of the contribution which it would make to those self evidently important national objectives. This positive aspect of the appellant's case is common to all RE projects. The issue which arises is where such wind energy projects should be located.

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<sup>160</sup> see the plan at Document H3.

<sup>161</sup> Document N(LV)18 Figs.24.a-i.

<sup>162</sup> InsQ and PoE24.2 Appendix 5B.

<sup>163</sup> Mr Brown PoE6.1 paragraph 6.19.

<sup>164</sup> Compare and contrast to the single-minded archaeologist in the Thackson's Well Farm decision; Document N(P)24 paragraphs 52-55.

<sup>165</sup> Document N3 at page 51, concerned with policy overview.

### *Locational considerations*

120. It is vital to understand precisely what is the correct approach to the location of wind energy projects where national designations are at issue. PPS22 provides that in sites with nationally recognised designations, including scheduled monuments, listed buildings and registered parks and gardens, planning permission for RE projects should only be granted where it can be demonstrated that the objectives of designation of the area will not be compromised by the development, and any significant adverse effects on the policies for which the area has been designated are clearly outweighed by the environmental, social and economic benefits (emphasis added).<sup>166</sup>

121. RE projects should only be granted where it can be demonstrated that the objectives of designation would not be compromised. Where there is such compromise the requirement is that the adverse effects are clearly outweighed by the environmental and other benefits. If this policy were not to apply because the development was considered not to be in such an area, it would be necessary to ask where then in the guidance would it be possible to obtain an indication as to how such nationally recognised designations are to be protected in the context of wind energy development.

### *Compliance with development plan*

122. The Development Plan is reflective of the approach in PPS22, particularly RSS8 Policies 1, 26 and 40.<sup>167</sup> Policy 40 deals with onshore wind energy and requires that particular consideration be given to a range of factors, including RE targets, objectives on climate change, and the effects on the natural and cultural environment, including historic assets and their settings. The policy requires particular consideration to be given to the number and size of turbines proposed.

123. Policy 26 requires that heritage assets should receive the highest level of protection and any damage to such assets or their settings should be avoided wherever and as far as possible. The policy uses the term “minimised” requiring that unavoidable damage must be minimised and clearly justified by a need for development in that location which outweighs the damage that would result.

### *Other issues*<sup>168</sup>

124. Development of this scale and type could not be screened and would inevitably have some landscape and visual impact, but it is not considered that the local landscape, in topographical terms, would not be capable of absorbing wind turbine development satisfactorily. The fact that the proposed turbines would be seen from a number of dwellings, and in some cases would be prominent and would significantly change views of the countryside, is not determinative in itself. The findings of the cumulative impact assessment are not disputed.

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<sup>166</sup> PPS22 paragraph 11.

<sup>167</sup> Document CD1. Moreover, the approach in RSS8 Policies 26 and 40 seems to reflect the SoS's draft Policy HE11 in the *Consultation Paper on Planning For the Historic Environment* (PPS15), which states, amongst other things, “When considering applications for development within the setting of a heritage asses, local planning authorities should treat favourably applications that preserve those elements of the setting that enhance the significance of the asset.”

<sup>168</sup> Matters not disputed by HDC and set out in the Committee Report N3 pages 69-77.

125. Adequate mitigation measures could be secured to safeguard wildlife. Notwithstanding the proximity of the M1 motorway and A14, it is not considered that the proposal would cause any significant distraction to drivers. The scheme is acceptable from a highway safety perspective. PRoWs which cross the site are well used. However, there is no statutory separation distance between turbines and PRoWs, the minimum distance often being taken to be that the turbine blades should not be permitted to over-sail a PRoW. There is only a marginal shortfall on the British Horse Society's (BHS) guideline for separation from bridleways. Horses would not be likely to see the turbines so suddenly or dramatically as to cause distraction.
126. Mitigation measures could be secured to control shadow flicker. The level of construction noise would be acceptable. There is no reason to justify either refusal of permission, or to seek greater separation between houses and turbines than that required to secure compliance with the noise exposure limits in ETSU. Properly designed and maintained turbines are a safe technology. Blade failure is most unlikely. There is no convincing evidence that the proposed wind farm would pose a significant risk to Harborough's tourism industry in general, or to local tourism businesses.

#### *Analysis and conclusions*

127. HDC resolved that by reason of its scale, appearance, siting and nature, the proposed development would have a harmful impact upon the setting of Stanford Hall, its RHPG and Stormsworth SAM. The harm to the heritage assets, and each of them, is such as to outweigh the policy support and material benefits which attach to all wind energy proposals. An important aspect of this submission is that the proposed scale, arrangement and siting of the proposed development have not been demonstrated to be avoidable with reference to alternatives. In other words, there appear to be fairly straightforward ways by which these impacts could be avoided by alternative scale, arrangement and siting of the turbines.
128. Nuon has failed to engage with these deficiencies in the scheme. It is plain from a review of the photomontages that, absent any esoteric argument as to the setting, there would be material and very significant harm to each of the important cultural heritage assets which are at issue. There have been iterations in the design of the proposal.<sup>169</sup> However, Nuon has not produced any information to show that the impacts upon Stanford Hall or the RHPG have been addressed by design changes. A development at a lesser height, such as 100 m high turbines, would have a materially reduced impact upon the cultural heritage assets. A scheme consisting solely of WT1-WT6 would reduce the impact upon the setting of the northern section of the RHPG and also the SAM.<sup>170</sup> There is only the appeal scheme before the SoS rather than a range of alternatives, but the EIA Regulations require an outline of the main alternatives studied by the appellant. HDC reserves its position on a point of law as to the adequacy of the ES by reason of the failure to assess these alternatives.<sup>171</sup>

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<sup>169</sup> Table 4.1 Document N2.1 (page 4-9) and Documents N15.1 and N15.2.

<sup>170</sup> Mr Patterson PoE 7.1 Section 5.8.

<sup>171</sup> PoE7.3 Appendix 4. However, HDC acknowledges that the judgement in *R v SSETR ex p Challenger* [Document H2] is against it. In HDC's submission the present position is that, so far as the point has been ventilated in the domestic cases, a literal approach has been taken

129. EH's view on the impact of the proposal on the RHPG and Stanford Hall has changed over the course of the consultation. However, the precise nature of the development upon which it was being consulted and the information with which it was supplied has also changed over time. What is most important is that by May 2008 there was the clearest and strongest objection from EH on the basis of the impact upon the RHPG and Stanford Hall.<sup>172</sup>
130. To reduce the height of the turbines would reduce the quantum of electricity which would be produced; and would in turn reduce the economic, social and environmental benefits which would flow from the scheme. However, there is no means available by which to make any sort of quantitative balance or assessment as to the relative value of preserving, so far as possible, the setting of these nationally important heritage assets and the marginal loss in RE. No particular environmental, economic or social benefit is prayed in aid of this appeal scheme. Rather, reliance is placed solely upon the generic benefits (albeit that they are acknowledged to be of considerable significance), which flow in terms of the energy supply and dealing with climate change.
131. There is a current shortfall in installed capacity for RE which exists by reference to the RSS8 targets in Policy 40. This falls to be assessed in the round. It is very far from the position that a shortfall from a regional target should lead to consent for a scheme, which in other circumstances would be refused. HDC is one amongst several districts in this part of the country which has potential for wind energy proposals. There are numerous such projects which are at different stages in the planning process, from scoping, to application, and to appeal. The process of developing wind energy proposals in this part of the country is not at an early stage, as is evident from the cumulative impact assessment and the list of projects in Appendix 1 to the SoCG.<sup>173</sup>
132. Nuon tacitly concedes harm to heritage assets by relying on the inherent benefits of RE projects. This need not be so. The scheme could easily have avoided harm of such significance and damaging extent. Nuon has failed to appreciate the high level of protection which the planning system affords to such key parts of our heritage. If locational considerations were to be ignored in renewables cases, then the SoS's guidance and the development plan would say so – they do not. The scheme is inappropriate on this site, and so the appeal should be dismissed.

### **The Case for SSWFAG**

The main points are as follows.<sup>174</sup>

#### *Landscape and visual impact*

133. The proposed development would create a new landscape character area in which the turbines would become a joint primary characteristic along with the transport infrastructure corridors and possibly the extensive warehouse

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to the construction of the EIA Regulations. The purposive approach has not been argued, despite it being clear that the Directive is to be construed purposively.

<sup>172</sup> PoE1.3 Appendix 4 at pages 118-121, EH letter of 6 May 2008.

<sup>173</sup> Cumulative impact wireframes and photomontages are included in Document N(LV)18.

<sup>174</sup> Based on closing submissions – Document S27.

development around Rugby and Lutterworth.<sup>175</sup> It would also have a moderate adverse impact on the character of the local landscape, in particular on its historic character.<sup>176</sup> However, the proposed development would result in a major adverse impact on a number of closely related historic assets of significant importance associated with Stanford Hall and the RHPG.

134. EH recognises that; “the historic character of the landscape should...be considered alongside other aspects of character and visual and aesthetic issues when...determining planning applications, and landscape capacity and sensitivity analyses should always include the historic dimension”.<sup>177</sup> It adds that; “Wind energy developments may impair the setting of historic sites and can compromise the visual amenity of the wider landscape, detracting from historic character, sense of place.. and ..tranquillity”.<sup>178</sup>
135. The *Guidelines for Landscape and Visual Impact Assessment* identify the need to consider “special interests”, including historical or cultural heritage in the course of landscape character assessment, from desk top study to judging the value or importance to society of the affected landscape.<sup>179</sup> Landscape cannot be divorced from its historic components, the two are indivisible. In attempting to separate the historic landscape elements from their host landscape Nuon has seriously underestimated its sensitivity, counter to the guidance of the Landscape Institute. It is also at odds with advice from EH that; “Wind farms need to be carefully sited to avoid compromising significant landscapes or the visual setting of important sites or buildings where the integrity of that setting is an important part of their significance” (emphasis added).<sup>180</sup>
136. The question of setting has been debated in academic papers. EH’s *Practice Guide* - Living Draft contains useful indicators of the direction of thought of that statutory consultee about what constitutes the “setting” of a heritage asset.<sup>181</sup> Current thinking is that “setting includes but is not restricted to visual relationships...” and that “the ability to appreciate significance can be harmed, improved or left unaffected by changes in setting” and that “this is perhaps most likely to be through the addition or removal of permanent visual intrusion” (emphasis added). It adds that; “Effects on setting may be limited to heritage assets within the boundary of the proposed development and its immediate surroundings, but can extend to a far wider area. In the case of large or particularly prominent development, such as a high rise building, affected assets may be a considerable distance away”.<sup>182</sup> This is a draft which limits the weight it can be given, but it echoes the current guidance in PPG15 at paragraph 2.17, which notes that “a high or bulky building might...affect the setting of a listed building some distance away, or alter views of a historic skyline”.<sup>183</sup>

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<sup>175</sup> Document N2.1 paragraph 6.8.12. Ms Bolger PoE8.2 paragraph 11.

<sup>176</sup> Ms Bolger PoE8.2 paragraph 23.

<sup>177</sup> Document N(CA)4 page 9, second column, first paragraph.

<sup>178</sup> *Ibid*, page 7, second column, first paragraph.

<sup>179</sup> Document N(LV)26, page 67 and paragraphs 6.17-6.18 page 70.

<sup>180</sup> Document N(CA)5.

<sup>181</sup> *Practice Guide* - Living Draft, 24 July 2009, Document ID5.2 paragraphs 49-55.

<sup>182</sup> *Ibid* paragraph 33.

<sup>183</sup> It was on that guidance which the Inspector relied when considering the impact of turbines 4 kms from a Grade 1 listed church in Boxworth and Connington decision Document S(A)1, paragraphs 46-47.

137. Nuon identifies a narrow geographic area based on an assessment of the special interest of the historic asset and the relationship of the surroundings to the asset. This excludes the majority of the RHPG from the definition of Stanford Hall's setting, and all but a very limited area of land, some of which is within the appeal site boundary, from the setting of the RHPG. In the appellant's submission no impact could result on setting unless the physical development fell within it. However, there is no support for this method of defining setting in policy or previous appeal decisions. Development visible in the sky above or on the skyline around the asset could impact on setting. There is support for this view from a range of decisions which addressed the degree to which the development operated visually upon the setting, rather than requiring a limited definition of setting into which the physical development was placed.<sup>184</sup> This is also supported by the definition of setting in the draft PPS15: "The area surrounding a heritage asset within which activity or development may affect the significance of that asset."<sup>185</sup>
138. The entirety of the RHPG forms the setting to the Hall. Paragraph 2.16 of PPG15 states that; "the setting is often an essential part of the building's character, especially if a garden or grounds have been laid out to compliment its design or function". Colcutt records that; "the setting of a listed mansion may include its extensive parkland, some of which may be out of sight of the building itself, but integral to its original purpose".<sup>186</sup> Lambrick refers to visual perception of the surroundings of an historic place being almost always the dominant consideration, recognising that views both of and from can be very important. The impact on setting cannot be entirely divorced from some indication of what is liable to be changed by the development in question.<sup>187</sup>
139. The proposed development would dominate the Grade 1 listed church of St Nicholas at Stanford on Avon, being set on the ridgeline over the church.<sup>188</sup> There is concern about views to and from the church, as well as the effects on views from the Percy Pilcher memorial.<sup>189</sup> The turbines would also compete with the spire of the listed St Nicholas Church, South Kilworth, which is currently a prominent skyline feature.<sup>190</sup> The turbines would be visible from Swinford Conservation Area and listed buildings within the village, as well as the cricket ground, and other listed buildings in the wider area.<sup>191</sup>

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<sup>184</sup> See decisions at Langdon S(A)4, Thackson's Well Farm N(P)24, and Elland's Farm S(A)5.

<sup>185</sup> Document ID5.1 Annex 1 Terminology page 24.

<sup>186</sup> Document N(CA)9, page 19, footnote 66, referring to the HA 2007 *Design Manual for Roads and Bridges*.

<sup>187</sup> Document N(CA)2.

<sup>188</sup> see PoE16.2 Appendix 7, photo 3809 and Ms Bolger PoE8.1 paragraph 3.6.4. [*Inspector's note – It was apparent from my site visit that the church lies in a depression between ridges, and so its low tower is seen nestled amongst the trees that from this vantage point appear as a heavily wooded belt along the ridge slope.*]

<sup>189</sup> Ms Wiggins PoE14.1 and PoE14.2.

<sup>190</sup> Ms Warren PoE23.1 highlights its southern aspect, see also PoE23.2 Appendix 3.

[*Inspector's note – From my site visit it was evident that there are few vantage points where the church spire would be seen directly in front of the proposed wind farm. Views from within South Kilworth are generally restricted by buildings, trees and the topography. Some views from vantage points to the east of South Kilworth, in the vicinity of North Kilworth Mill Farm and beyond might include the church spire in the middle ground with the proposed wind farm in the background, but both would be seen at some distance.*]

<sup>191</sup> Ms Waters PoE24.1 and Ms Warren PoE23.1.

140. The current occupier of Stanford Hall referred to the area of parkland shown on the 1924 map<sup>192</sup>, which included the northern park as “the core park”, and described how it served the Hall historically by providing rides, carriage drives and vistas, which included those in Rookery Wood, as well as the north avenue, coverts serving Victorian shooting parties, the deer park, and the radiating routes to the wider estate. Historic links are also provided by the tree lined routes to Swinford. The trees lining the road from South Kilworth had been planted by the estate. That wider estate context, still marked by the listed mileposts at Stanford Mears and elsewhere, can be appreciated from the bridleway which links Park Farm to the Mears, as can the setting of St Nicholas Church at Stanford on Avon.<sup>193</sup> A Heritage Management Plan is underway and includes replanting and restoration.<sup>194</sup> There is concern that the proposed wind farm would undermine this investment programme, and might set a precedent for other listed buildings.<sup>195</sup>
141. The site lies in a transitional landscape, crossing the boundaries of both two local and two national LCAs. The site is not a plateau, but lies on the south-east facing slope looking towards the Northampton Uplands, which has implications for views from the Hemplow Hills.<sup>196</sup> The site has a complex topography, with minor subsidiary valleys which fall generally towards the Avon. These minor valleys are part of the topography that forms Gravel Hill and Hovel Hill within the RHPG and which is the base element of the landscape pattern that gives the area its distinctive quality.<sup>197</sup>
142. There is a growing consensus that large scale landscapes with simple landscape patterns are more capable of absorbing wind turbine development. *Placing Renewables in the East of England* lists the physical and perceptual characteristics that are indicators of sensitivity to onshore wind development.<sup>198</sup> The appeal landscape has few of these attributes. The issue is not visibility of the development, or whether trees would filter views, but the suitability of the landscape.<sup>199</sup> The complexity of the landscape here indicates that it may not be suitable for wind turbine development.
143. Nuon considers that the number and extent of turbines would have similar effects even were they to be reduced in height, which fails to acknowledge that reduced height can affect impacts on historic assets. Consideration should have been given to reducing the height of the turbines so that they would not be seen over Rookery Wood.<sup>200</sup>
144. Nuon is keen to rely on the “reversibility” of the development. EH advises that “unless of very short duration, crude and intrusive changes are certainly not justifiable simply because they are theoretically temporary or reversible, for they

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<sup>192</sup> PoE1.3 Appendix 1 page 39 of appendices.

<sup>193</sup> Mr Fothergill PoE22 and evidence to the Inquiry.

<sup>194</sup> Document S(CH)1 Volume 4.

<sup>195</sup> Mr Fothergill PoE22.

<sup>196</sup> Document N2.2 Viewpoint 10 Fig.6.12xviii. See also more distant views from Honey Hill Viewpoint L3 Document N(LV)18 Fig.23.c.

<sup>197</sup> Ms Bolger PoE8.1 paragraph 3.2.11.

<sup>198</sup> PoE8.3 Appendix 4 page D3.

<sup>199</sup> See decision at Elland’s Farm S(A)5, paragraph 16.

<sup>200</sup> See decision at Thackson’s Well Farm N(P)24 paragraph 78.

risk becoming permanent.”<sup>201</sup> An Inspector has observed; “The Appellant has made much of the reversibility of the project, but to my mind the extent to which this argument is deployed rather undermines its efficacy. If the development was compatible with its landscape setting there would be no need to protest that the scheme is of a temporary nature.”<sup>202</sup> The impacts here would be long-lasting and substantial even if a condition required their ultimate removal.<sup>203</sup>

### *Living conditions*

145. The living condition of local residents is a social issue, which PPS22 requires to be addressed satisfactorily. This includes impact on; residential amenity flowing from the visual impact on individual residences, local routes and facilities serving the communities, the landscape within which they live and move, and health or reasonably justified fear of such impact arising from noise disturbance.
146. SSWFAG adopts the test for significant impact on residential amenity, arising from visual impact, used by other Inspectors: “...when turbines are present in such number, size and proximity that they represent an unpleasantly overwhelming and unavoidable presence in main views from a house or garden, there is every likelihood that the property concerned would come to be widely regarded as an unattractive and thus unsatisfactory (but not necessarily uninhabitable) place in which to live. It is not in the public interest to create such living conditions where they did not exist before.”<sup>204</sup>
147. Walcote, South Kilworth and Swinford would all be within 2.5 km of a turbine. Within that area are additionally 63 isolated properties - of which there would be, in the appellant’s opinion, a significant impact on 44 properties. Properties on North Street, The Close, School Lane, Rectory Close and Kilworth Road within Swinford would also suffer significant effects. The appellant’s landscape witness considers that the turbines would have to be some 200-300 m nearer to dwellings for them to have an overbearing impact.<sup>205</sup> Numerous Inspectors have found smaller developments unacceptable at that distance.<sup>206</sup>
148. Many local residents are critical of the residential amenity assessment submitted and raised genuine concerns about the likely effects of visual dominance, noise and shadow flicker.<sup>207</sup> Some submissions included photographs of a blimp flow at two locations near to the appeal site.<sup>208</sup> A re-assessment of the impact on residential properties with the assistance of some of

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<sup>201</sup> N(CA)6 paragraph 101, page 47.

<sup>202</sup> Boxworth and Connington decision S(A)1.

<sup>203</sup> Mr Croucher PoE9.1 paragraph 5.5 page 39.

<sup>204</sup> Document S(A)4.

<sup>205</sup> InsQ.

<sup>206</sup> For example, decision at Bearstone (Document S16) 7 x 110m wind turbines unacceptable at 750m (at paragraph 44), decision at Langdon (Document S(A)4) 5 x 120m wind turbines typically unacceptable up to 800m (paragraph 71).

<sup>207</sup> Ms Money PoE16.1, Dr Aram PoE17.1, Mr Blockley WS2.1.

<sup>208</sup> *[Inspector’s note - The fields where the blimp was flown are shown at PoE16.2 Appendix 5. The length of its tether was adjusted to allow for wind strength in accordance with the calculation included at Document S26. See also WS4.1 and WS4.2. It was not flown at the position of any of the proposed turbines. I consider that its siting and the effects of the wind make it difficult to relate its position in photographs to the position and height of any of the proposed turbines.]*

their occupiers, rather than relying on estimations made from aerial photographs or from public routes, concludes that within Swinford 148 properties would be adversely affected; within South Kilworth 26 and within Walcote 6. These additional properties would bring the total number of affected properties to 224.<sup>209</sup> This impact on the residential amenity of residents would be exacerbated by the impossibility of their escaping the presence of the development as they went about their daily affairs within their villages, visiting their neighbours, walking the children to school, or using the local roads and public rights of way.<sup>210</sup> For those whose homes would be exposed to noise or shadow flicker the impact would be even greater. A number of houses in South Kilworth would have an outlook towards the proposed wind farm. The impacts on the living conditions of residents would be unacceptable, are not demonstrated to be minimised, and therefore cannot be said to be addressed satisfactorily. Accordingly the development's location does not accord with the guidance in PPS22.

### *Public Rights of Way*

149. A public route, which runs across the appeal site, and which once traversed the wider Stanford Hall estate, is an extension to the gated road through the RHPG, and identified by an archaeological assessment as of Roman origin.<sup>211</sup> It links a range of footpaths, local lanes and bridleways before crossing the Grand Union Canal. From long sections of it, and the numerous routes it crosses, the turbines would be patent. The ES underestimates the impact on rights of way in this richly accessible part of lowland England. There is extensive use of these routes by local walkers, cyclists and equestrians.<sup>212</sup> Footpath Y66b running south from South Kilworth, described in the ES as in a minor valley, in fact climbs out of it to provide a fine view to the Avon Valley and the Hemplow Hills. More distant routes, because of the undulating topography, currently provide splendid open views across the site.<sup>213</sup>
150. The BHS considers that turbines should be separated by four times their height from routes which are likely to attract visitors unfamiliar with turbines. Moving shadows from blades is identified by BHS as likely to upset horses. There is an objection to WT1-3, which would lie close to, and east of, Lutterworth Road, and to WT4/WT7 and WT5/WT9, which would be either side of the track across the appeal site.<sup>214</sup> Horses would react to blade movement and the sheer size of turbines, and so warning signs would be necessary.<sup>215</sup>

### *Noise and health effects*

151. The proximity of the development to so many homes has occasioned concern amongst the local medical profession, as well as their patients. They record the substantial anecdotal evidence of reduced well-being in those living close to wind farms. That their concern is not insubstantial is demonstrated by the steps taken

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<sup>209</sup> Mr Jebson PoE15.1 and PoE15.2.

<sup>210</sup> Ms Ragsdale PoE18.1 includes concerns about the effects on the local school, cricket club and micro-light club.

<sup>211</sup> EiC Mr Fothergill, see also references to possibly early Roman finds at S(CH)1 Volume 3 page 2.

<sup>212</sup> Prof Eperon PoE19.1.

<sup>213</sup> PoE19.1 and PoE19.2.

<sup>214</sup> Ms Allen PoE21.1.

<sup>215</sup> Ms Adlerstein PoE20.

- to assess the health of all households within 2 km of the appeal project. Research into the effects of wind farms that has been carried out so far has been undertaken by those with a vested interest in wind farm deployment, rather than being independent, scientific, medical research.<sup>216</sup> Industry and Government reports which seek to show that there is no problem are unconvincing.
152. Other research so far undertaken, albeit much of it not of the highest standard, tends to confirm that sleep disturbance, and, in some cases, health effects, associated with wind farm development do occur. Medical research on sleep deprivation which post-dates ETSU and PPS22, is a material consideration. PPS22CG does not address the issue, considering only low frequency noise as a health issue. Sleep disturbance can arise at low levels of noise, despite the levels endorsed by ETSU as providing reasonable protection for amenity, and some 20% of wind farms have given rise to complaints of audible noise.<sup>217</sup>
153. Evidence presented to the Inquiry includes research published in peer reviewed journals.<sup>218</sup> SSWFAG does not attempt to identify definitively the levels or characteristics of noise which appear to be producing the complaints, but notes that the prevalence of complaints indicates that the precautionary principle should be applied in the absence of proper, independent, research. The application of the precautionary principle<sup>219</sup> supports the view that the development should not be permitted in such close proximity to so many homes.
154. PPS22, PPS23 and PPG24 post-date ETSU and note that the best protection from noise is the proper separation of noise generating development from existing noise sensitive development.<sup>220</sup> This approach has been endorsed by Inspectors.<sup>221</sup> ETSU compliance would not ensure that the turbines would not be audible. In March 2009 acousticians involved in wind energy development published a paper recognising that ETSU fails properly to assess the phenomenon of AM.<sup>222</sup>
155. There are uncertainties in the noise assessment carried out in the winter by the appellant.<sup>223</sup> No details are available about measurement locations. However, it is known that there was an abnormal noise source (chickens) close to the measurement point at one location, a building within a distance that would indicate that the measurements were not free field, and a line of trees. Data was

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<sup>216</sup> Mr Finch PoE12 paragraphs 2.8, 2.11 and 2.12.

<sup>217</sup> Dr Hanning PoE11 page 28 notes that noise can disturb sleep by arousals, which are brief awakenings that are not remembered, and that all research to date has only measured remembered awakenings and has grossly underestimated the impact of turbine noise on sleep. In answer to my question it was clarified that research on a double-blind trial basis would assist, but that this was more expensive than questionnaire type surveys and funding was not available.

<sup>218</sup> Dr Hanning PoE11 page 12 cites research by Pierpont (in press) [Document S(S)37] concerning 10 families affected by wind turbine noise and considers that this is evidence of a clear relationship between symptoms and noise exposure, and suggests a plausible physiological mechanism related to low frequency sound to explain the link.

<sup>219</sup> PPS23 paragraph 6.

<sup>220</sup> Dr Hanning PoE11 page 29 states that evidence from studies of existing wind farms dictates set backs of at least 1.5 km.

<sup>221</sup> Document N(P)28 paragraph 56.

<sup>222</sup> Document N(N)7.

<sup>223</sup> Mr Havergill PoE10.1 and PoE10.2.

manipulated by the removal of public holidays, which might have affected the available distribution of wind speeds and direction. The scatter graphs show two distinct data sets, depending on wind direction.<sup>224</sup> The analysis does not have proper regard to the fact that in Swinford when the wind is from the east background noise levels from the M1 motorway would be much reduced at a time when wind turbine noise would have its greatest effect. No consideration is given to the Catthorpe junction improvements.<sup>225</sup> Had the noise measurement locations been agreed with the EHO here, the International Standard<sup>226</sup> methodology adhered to, the additional factors been taken into account, and the original acousticians been presented to answer for their work, then the process would have been seen to be open and fair, and the results more robust.

### *Archaeological remains*

156. The scheme would not have an adverse physical impact on archaeological remains, save for some disturbance of ridge and furrow fields. The DMV is more extensive than the scheduled area, lying to either side of the gated road as it passes north of the Rugby Road, as well as continuing south of Rugby Road.<sup>227</sup> Public access is therefore readily obtained through the scheduled and non-scheduled elements of the DMV. Its appreciation by those using these routes would be effected by the overpowering scale and visual dominance of the turbines.<sup>228</sup>

### *Other matters*

157. The IT Power Report Planning for Climate Change 2008, which is supportive of this general location as a wind site, applies only a World Heritage Site cultural heritage filter. It suggested a site not as proximate to Stanford Hall and was advanced as having a potential capacity of only 3-4 turbines.<sup>229</sup>
158. Nuon is not obliged to consider alternatives or follow any sequential test to demonstrate that this is the best site. However, when a site is promoted which is so clearly harmful to issues of acknowledged importance, such as cultural heritage and residential amenity, and is fiercely promoted on the basis that targets are not going to be met, then it would be unreasonable not to take into consideration the prospect of targets being met from other locations.<sup>230</sup> However, whether in scoping, or at application stage, there are numerous applications in the pipeline. If this site is suitable it should come forward to meet the targets. If it is unsuitable, then it should not be accepted because of a target shortfall, more particularly when there are other sites currently coming forward.
159. The site lies within uncontrolled air space, where effective primary radar is considered essential to safe air operations, and gliders from Husbands Bosworth

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<sup>224</sup> Document N2.2 Fig.7.2.

<sup>225</sup> [*Inspector's note – PoE10.3 Appendix 8 shows predicted significant changes in noise level in the design year 2027. However, this indicates some properties in Swinford likely to benefit from a noticeable decrease, whilst others are predicted a significant increase.*]

<sup>226</sup> Document S(N)9.

<sup>227</sup> PoE24.2 Appendices 5b and 5c.

<sup>228</sup> PoE24.1 paragraph 16.

<sup>229</sup> Document N(P)5 and N(P)5a.

<sup>230</sup> InsQ about cumulative impact. See also Document ID7.

are rarely fitted with transponders.<sup>231</sup> There is also local concern about highway safety and possible distraction for drivers.<sup>232</sup>

### *Development plan and national policy*

160. The development plan for the area was brought up to date by RSS8. The SP has no relevance to the appeal. The LP contains no RE policies, although it does contain policies saved in September 2007, which remain part of the statutory plan and to which weight must be given, albeit, given its age, where it is inconsistent with more recent regional policy that takes precedence. Furthermore, where the LP is inconsistent with more recent national policy, that should be given considerable weight. Those LP policies of particular relevance to this appeal are IN/1, EV/5, EV/16, EV/18 and EV/23.<sup>233</sup>
161. Core Objectives of RSS8, promoting sustainable development, recognise both the need to reduce CO<sub>2</sub> emissions (Policy 1(i)) and the need to protect the environment for the benefit of people (b and d) and the Region's natural, cultural and historic assets (g). RSS8 seeks to achieve those objectives which are particularly relevant to this appeal through Policy 40, in respect of RE deployment, and Policies 26, 27 and 31, which seek to protect the local environment.
162. Policy 40 is directed to all low carbon energy generation technologies. The explanatory text to the policy indicates that wind energy is to be part of the mix and that much of the Region could be suitable for turbine deployment "subject to a number of criteria, including visual impact and the cumulative effect of a number of turbines and their actual size."<sup>234</sup> No test is set out to indicate the weight to be attributed to any issue. However, Policy 40 properly interprets national advice that requires a balance of considerations to inform the decision maker in both identifying suitable areas for future use and individual planning applications.<sup>235</sup> The supporting text to Policy 31 notes that the lack of national designations does not mean that there is a lack of landscapes of character which need to be better conserved and enhanced, and notes in particular the ridge and furrow landscape of Leicestershire and historic parklands.<sup>236</sup>
163. The proposal is inconsistent with the development plan for the area. There is significant harm to the setting of heritage assets; to landscape character; significant adverse visual impact; harm to residential amenity by virtue of the size, number and proximity of the turbines; and those harms are not outweighed by the wider benefits of the proposal.
164. The appeal scheme would be inconsistent with PPS22 which gives guidance on suitable locations for RE developments, where "environmental, economic and social impacts can be addressed satisfactorily". It would also be at odds with guidance which encourages RE "subject to appropriate environmental safeguards" and seeks to promote greater acceptance by the public of RE developments which are appropriately sited. Of all RE technologies, wind turbines are likely to

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<sup>231</sup> Mr Benoist WS3.

<sup>232</sup> Dr Aram PoE17.1 and Document S19.

<sup>233</sup> Document CD3.

<sup>234</sup> CD1 paragraph 3.3.86.

<sup>235</sup> Document PoE9.1 paragraph 2.57.

<sup>236</sup> Document CD1 3.3.23.

have the greatest visual and landscape effects, and paragraph 19 advises that impact will vary according to the size and number of turbines and the type of landscape involved. PPS22CG recognises that issues of quality and value of the landscape will be relevant when landscape character assessment is used to inform decision making.

165. The landscape and visual effects should be assessed on a case by case basis “using objective material and analysis wherever possible”.<sup>237</sup> There is no support for valency or a plebiscite, but professional judgement should be used.<sup>238</sup> The appellant’s landscape witness preferred to rely on the valency approach rather than give professional judgement on whether the nature of effects would be adverse or beneficial.
166. No minimisation of many of the harmful effects identified above, by re-locating the development, has been considered and, although attention has been paid to achieving the ETSU limits, there is no evidence that any further attempt has been made to minimise noise levels.
167. Table 4.1 of the ES identifies the iterations undertaken by the developer. The preliminary move, after considering visual impact, was to increase the height of the proposed turbines (which then involved 17-20 turbines). Thereafter, turbines were located to meet the ETSU guidelines, but no further minimisation of noise impact was contemplated. The reduction in scale to 11 turbines was not to address any particular adverse impact, although the remaining cluster was “amended to maximise distance from Swinford”. Comparison with the original plan suggests only one turbine was removed from the Swinford side of the development and the supposed maximisation of separation distance appears to have achieved little, for the nearest proposed turbine remains within 1 km of the village.<sup>239</sup> In respect of close residential properties, such as Poplar’s Farm, no attempt at minimisation by re-location, siting or design appears to have been attempted.
168. The proposal is inconsistent with the Government’s policy on energy, which supports the deployment of RE projects in appropriate locations, because it would be inappropriately sited. The appeal scheme would provide no more, and no less than, any other wind energy development of 11 turbines of up to 2.5 MW installed capacity with an expected load factor of 27.5%. It would provide up to 16% of the energy consumption of the District if its projected load factor was achieved. This would be a very useful contribution, which would assist security/diversity of supply and CO<sub>2</sub> reduction. These are the factors which the statement of need indicates benefit all communities and are identified as the wider benefits to which significant weight must be given.<sup>240</sup> But these are benefits which are common to any wind energy proposal.
169. However, the need for renewable projects to be appropriately sited is equally set out in the Statement of Need – and that is a concept taken forward even into the 2009 *UK Renewable Energy Strategy*.<sup>241</sup> Furthermore, the White Paper

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<sup>237</sup> PPS22 paragraph 19, PPS22CG paragraph 5.14.

<sup>238</sup> As other Inspector’s have noted in decisions at Aston Grange, paragraph 40, Document N(P)18; and Goveton paragraph 8, Document S15.

<sup>239</sup> Document N2.2 Fig.6.12iii.

<sup>240</sup> Document N(P)8, page 157, Box 5.3.3. last paragraph.

<sup>241</sup> Document N20, paragraph 3.6 (1) page 14-15.

identifies the intent to issue PPS1supp and that in finalising its content the Government would look to ensure that it is consistent with the energy policies set out in the White Paper.<sup>242</sup>

170. PPS1supp paragraph 20 identifies that it is only the energy justification of the location which cannot be questioned. However, the decision maker is advised to ensure that any local approach to landscape protection is consistent with PPS22, and paragraph 42 provides that new development should deliver a high quality local environment. That the intent of Government policy is not to over-ride the long standing protection of other interests is made clear in the White Paper: "Although the government has taken action to articulate national energy policy, inspectors and other participants in the planning system must balance this against the full suite of planning policy statements when assessing the need for and the environmental consequences of a project".<sup>243</sup>
171. The White Paper also notes thorough preparation by the developer and early engagement with key parties, including affected local communities, and relevant public bodies such as EH are essential if the project development process is to be effective and the planning system able to deliver decisions efficiently.<sup>244</sup> Proximity to residential areas, affect on living conditions, impact on landscape and historic assets were identified at an early stage by local residents. EH also identified the latter. The response from Nuon appears from its "iterations" to have been retreat from the area of land most proximate to the transport corridor and furthest from the identified sensitivities, and no or minimal change with regard to the turbines located near to people's homes, adjoining PRoWs, and adjacent to the RHPG. By being inconsistent with PPS22, PPS1, PPS7 and PPG15, the proposal is not consistent with the White Paper. Whilst the White Paper requires significant weight to be given to the wider benefits, it expressly does not require that other guidance be over-ridden. Instead it requires that there be a balance struck.

### *Conclusion*

172. Not all of the anxieties of local residents fit happily within the planning system. Matters addressed by guidance, or responses from statutory consultees, do not always suffice to quell anxiety. Knowing that modern turbines have failed in the recent past, shedding blades over significant distances, that beneath the site runs a gas pipeline, and over it run several rights of way, local residents question the safety of the proposal.<sup>245</sup> Government assurances have not always proven reliable in the past. The community's anxieties are also material considerations.
173. Many of the issues here can be quantified mathematically, other issues can be assessed, but the wider benefits cannot be quantified so readily. Although they must have some relationship to output, the unknown result of climate change, and its consequence for landscape, historic assets, or residents of other countries, makes assessing the contribution of any site to mitigation of that change an impossibility. To allow for the benefit of that mitigation in considering each topic must, inevitably, either miss some element or double count. It should

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<sup>242</sup> Document N(P)8, paragraph 8.19 page 258.

<sup>243</sup> *Ibid* page 256, paragraph 8.15.

<sup>244</sup> *Ibid* page 257.

<sup>245</sup> Mr Kilbane PoE13.1 and S22-S24.

be left to the end of the assessment, as PPS22 implies, by saying that the wider benefits should be given significant weight in determining applications: it does not say in assessing separate issues.

174. The wider benefits are unable to outweigh the policy conflicts of this proposal or the harmful environmental and social effects identified, and so the appeal should be dismissed.

### Written Representations

175. At the appeal stage 204 representations were submitted.<sup>246</sup> Of these 125 objected to the proposed development, whilst 79 wrote in support of the scheme. Those who oppose the scheme raise issues about inadequate wind data, poor wind resource, limited CO<sub>2</sub> savings, alternative renewable sources and maintenance problems of turbines; the size of the structures, in terms of precedent and cumulative impact; health effects from noise, vibration and shadow flicker; the effects on school rolls; effects on tourism, heritage, wildlife and migratory birds, livestock, TV and radio reception, traffic generation, aircraft safety, rural policy and horses; inadequate consultation; hazards due to fires or failures near to the gas pipeline, and disturbance from construction. The submissions in favour generally consider that the scheme would contribute to targets for RE, without undue harm to the landscape.
176. At the application stage 978 letters of objection were submitted, which referred to many of the issues raised above. Three petitions against the proposal from horse riders, parents of children at South Kilworth Primary School, and residents of local villages were submitted to the Council. There were 325 letters of support. These representations are summarised in the Report for the Council's Special Planning Committee, 10 March 2009.<sup>247</sup>

### Conditions

177. The main parties agreed suggested conditions in the event that the appeal were to succeed and planning permission to be granted.<sup>248</sup> I have considered the need for conditions and their wording in the light of the advice contained in Circular 11/95 *The Use of Conditions in Planning Permissions*.
178. Nuon suggested a five year commencement period so as to resolve any difficulties which might arise, for example with grid connection. However, there is some concern that this might delay delivery of those benefits upon which the appellants relies.
179. The scheme is for a limited duration and so a temporary permission for 25 years, along with provision for removal of structures and restoration, including any turbines which ceased to operate for a continuous period of 6 months, would be necessary. A micro-siting allowance of 50 m for the proposed turbines would be required so as to safeguard archaeological remains and wildlife. Details of the turbines including their colour, finish, air safety lighting and the warranted sound power level would need to be approved, as would details of the control building, temporary construction compound and anemometer mast.

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<sup>246</sup> Red folder with appeal file.

<sup>247</sup> Document N3, pages 38-49.

<sup>248</sup> Documents ID11.1 and ID11.2.

180. An investigation and alleviation of electromagnetic interference would be necessary, and mitigation measures approved in the interests of residential amenity. For similar reasons, the investigation and alleviation of shadow flicker would be necessary. A Construction Method Statement would need to be approved and the hours of construction and decommissioning works restricted.
181. A habitat management plan, along with monitoring of bird and bat strike would be required for nature conservation reasons. A programme of archaeological work would need to be approved. Details about the temporary access would need to be specified and a Transport Management Plan approved in the interests of highway safety. Details such as siting, geometry, visibility splays, surfacing and any gates, along with parking facilities, would for similar reasons need to be approved.
182. A Decommissioning Method Statement would need to be approved and provision made for a bond or other financial provision to be put in place to cover all decommissioning and site restoration costs. Detailed conditions regarding noise emissions would be necessary to accord with the guidance in ETSU and to safeguard the residential amenity of nearby occupiers. These would need to include measures to deal with any unacceptable AM.
183. A restriction on lighting, symbols, signs or logos or other lettering, other than those required for health and safety, traffic management or aviation safety would be required in the interests of the appearance of the area. For similar reasons, all cables within the development site between turbines and from the turbines to the substation would need to be set underground.
184. Given the basis on which the environmental effects of the proposal have been assessed, it would be necessary to specify that the number of turbines shall not exceed 11, that the blade tip height of turbines shall not exceed 125 m in height, and that the hub height of the turbines shall not exceed 84 m and shall not be less than 76 m. It would be necessary to require all turbine blades to rotate in the same direction. Provision for notifying the Ministry of Defence would also be necessary.

My conclusions begin on page 47 of this report.

## Conclusions

### *Preliminary matters*

185. The following conclusions are based on the evidence given at the Inquiry, the written representations and my inspection of the site and its surroundings. In this section the figures in parenthesis [ ] at the end of paragraphs indicate source paragraphs from this report.

186. The Inquiry was structured around the main topics, representing, albeit in a different order, the matters about which the SoS wished to be informed. Accordingly, I consider the following topics in my conclusions: [7, 8]

- (1) The landscape and visual impact (matter (e)).
- (2) Effects on cultural heritage (included under matter (h)).
- (3) Noise generated and its impact on residential properties (matter (f)).
- (4) The impact on archaeological remains (matter (d)).
- (5) Effects on nature conservation (included under matter (h)).
- (6) Other effects on the living conditions of local residents (included under matter (h)).
- (7) Other considerations (included under matter (h)).
- (8) Policy considerations (matters (a), (b) and (c)).
- (9) Whether the environmental and economic benefits of the scheme would be sufficient to outweigh any harm that might be caused (included under matter (h)).
- (10) Conditions (matter (g)).
- (11) Overall conclusions

Before doing so, I deal first with submissions concerning the ES.

### *Environmental Statement*

187. HDC reserved its position on a point of law as to the adequacy of the ES by reason of the failure to assess alternatives. Nuon does not accept that there is a free-standing legal requirement to consider alternative sites, and that the design/layout evolution of the scheme and its underlying rationale has been identified. The ES outlines design iterations, including layout alterations in response to on-site constraints and noise guidelines, along with the reduction to 11 turbines and revised layout to make the most efficient use of land and to present a balanced, cohesive design. [6,43,128]

188. I consider that this reasonably complies with the requirement to outline the main alternatives studied by the applicant and an indication of the main reasons for his choice, taking into account the environmental effects. The judgement in *R v SSETR ex p Challenger* supports such a literal approach to the interpretation of the EIA Regulations. HDC considers that it is clear that the Directive is to be construed purposively. However, no evidence has been adduced to indicate that either the law or policy requires the EIA Directive/Regulations to be interpreted in

a way which would necessitate the submission of more detail about the assessment of alternatives than that which has been provided here. I consider that appropriate and adequate information has been provided to assess the environmental impact of the appeal proposal, and that the ES reasonably accords with the EIA Regulations. I deal with alternatives as a material consideration in determining the planning merits of the proposal below.

*(1) Landscape and visual impact*

189. The appellant stresses the range of personal subjective opinions that people have about wind farms - some appreciate their aesthetic qualities, others do not. However, PPS22 at paragraph 19 advises that proposed developments should be assessed using objective descriptive material and analysis wherever possible even though the final decision on the visual and landscape effects will be, to some extent, one made by professional judgement. I consider that more weight should be given to the evidence adduced about landscape character and visual impact assessment than to the spectrum of response or 'valency' which exists towards wind turbines. [37,38,46,95,165]
190. The north-western part of the appeal site lies within the Lutterworth Lowlands Local LCA, which is an open and relatively flat, to gently rolling area that lacks large woodland areas. The M1 motorway is a significant visual feature in the landscape. The south-eastern part of the site is within the Laughton Hills LCA, a rolling area defined by a distinct ridgeline. Nuon considers that the wind farm would be a defining feature in the landscape within a limited area, and a dominant feature of the site itself, and would be a prominent feature affecting local landscape character up to approximately 2-2.5 km from the turbines. HDC believes that development of this scale and type could not be screened, and would inevitably have some landscape and visual impact. However, it does not consider that the local landscape, in topographical terms, would not be capable of absorbing wind turbine development satisfactorily. There is some agreement that the proposed development would create a new landscape character area, in which the turbines would become a joint primary characteristic, along with the transport infrastructure corridors and possibly the extensive warehouse development around Rugby and Lutterworth. SSWFAG contends that the proposed wind farm would have a moderate adverse impact on the character of the local landscape. I am satisfied that the removal of vegetation to create vehicular access would not unduly affect the appearance of the area and could be compensated by additional planting. [18,27,47,91,92,97,124,133,135]
191. PPS22 recognises that of all renewable technologies wind turbines are likely to have the greatest visual and landscape effects. Views from the nearest local villages, local view points and footpaths, indicate to me that utilitarian structures of this scale would have a significant local effect on what is generally a rural landscape. This would be at odds with Government guidance that the quality and character of the wider countryside should be protected. However, I consider that this landscape has considerable potential to absorb wind turbines, because of its open, gently undulating and rolling landform. There are minor valleys which fall towards the River Avon, and which do add some complexity to the local topography. However, these do little to break up what are generally views of long horizons within these LCAs. Locally such tall structures would have a significant visual impact, from more distant vantage points the proposed wind farm would not unduly impact on the appreciation of these long horizons. The appeal site is located in a transitional landscape, but I do not consider that the

proposal would have an unacceptable adverse effect on the integrity of either the Lutterworth Lowlands Local LCA or the Laughton Hills LCA. Nevertheless, it would result in some visual harm to the local landscape, which I consider would need to be weighed in the balance. [13,45,46,47,48, 141,142,149]

192. The cumulative impact assessment does not indicate any likely conflict with existing wind farms or turbines in the wider area. Some significant effects would result if the Yelvertoft and Lilbourne wind farms were constructed in addition to the appeal scheme. These are at application and scoping stages, respectively. Possible cumulative impacts are a material consideration, but I do not believe that the assessment demonstrates that the significant effects identified would add unduly to the harm to the local landscape which I have found above. [39,49,124]

## *(2) Cultural heritage*

193. Important features of heritage interest within the appeal site and in its vicinity form the bedrock of HDC's case. With the withdrawal of the third putative refusal for reason (buried archaeology), the only live issues, so far as concern EH and HDC, relate to the settings of three features, namely: Stanford Hall, the RHPG and the DMV. SSWFAG considers that the proposal would result in a major adverse impact on a number of closely related historic assets of significant importance associated with Stanford Hall and the RHPG. [51,99,133]

194. Stanford Hall is a Grade 1 listed building of exceptional quality and significance. It is a major tourist attraction. Its setting, according to HDC is provided by its park and garden, principally by the inner park as described on the Register. Nuon defines its setting to be the inner park south of Rookery Wood and the northern avenue. SSWFAG considers that the entirety of the RHPG forms the setting to the Hall. This accords with EH's view that the registered park is the designed setting of the listed building. The Hall is an imposing building and its presence or impact is enhanced by the way it is set within the formal parkland landscape. The setting defined by Nuon is limited largely to those areas within the park from which the Hall would be visible. I consider that its setting is wider than this, because the structured landscape means that when walking around the park it is possible to envisage the siting of the Hall within the formal layout, even though it might not always be visible. However, I do not consider that this effect extends beyond the confines of the RHPG. In my view, the setting of the Hall is more extensive than that identified by the appellant, but confined within the boundaries of the RHPG. The proposed turbines would, therefore, be sited outside the setting of Stanford Hall. Turbines would be visible above Rookery Wood and other trees in the vicinity of the Hall, particularly from the vantage point on the roof of the Hall. However, I consider that they would appear as distant structures beyond the setting of the Hall, which would not affect the significance of the Hall itself. [16,32,52,54,56,100-104,129,134,136,138]

195. SSWFAG submits that development visible in the sky above or on the skyline around a historic asset could impact on its setting. HDC also considers that the setting of the Hall is not restricted to a two-dimensional definition of the inner park, but includes the skyline around and above the park. I accept that the assessment should not be limited to two dimensions, but find here, for the reasons set out above, that the setting of Stanford Hall does not extend beyond the boundaries of the RHPG, and that no harm would result from views of turbines or moving blades on the skyline. I have also considered whether a

- historic skyline exists. Stanford Hall was designed for its advantage within a formal park. There is nothing to indicate that views outside of the park towards other features or the skyline influenced the design and layout of Stanford Hall. The formal avenues focus attention within the park towards the Hall, rather than towards features beyond the park or on the skyline. Rookery Wood serves to close off distant views from the Hall in that direction and so adds to the sense of enclosure within the formal parkland setting. I do not consider that the skyline in views from the Hall and its surrounds is a historic skyline for the purposes of applying the guidance in PPG15. [16,24,54,55,105,113,114,137]
196. I have had special regard to the desirability of preserving the setting of the Grade 1 listed Stanford Hall. I find no conflict with LP Policy EV/16, which amongst other things, provides that proposals for development within the setting of a listed building should respect its setting. On this basis, the proposal would accord with the guidance in PPG15. However, in the event that the SoS were to find that the skyline above Rookery Wood and other trees in the vicinity of Stanford Hall was a historic skyline, then the proposed wind farm would be at odds with the guidance in PPG15 because it would alter views of a historic skyline. However, I consider that the wireframes and photomontages indicate that such an alteration would be a modest change that would have only a limited impact on the Grade 1 listed building. Nonetheless, if the SoS were so minded, this would be a consideration which also weighed against the proposal. [16,23,24,105]
197. I have had regard to the submissions about EH's Living Draft *Practice Guide* and *PPS15 Consultation Draft*, which are material considerations. However, these can only be given limited weight because they are in draft and are open to further change. [25,61,62,136,137]
198. The proposed wind turbines would be visible from the northern and western parts of the RHPG. Moving blades would also be seen on the skyline, often above trees, from other parts of the RHPG. However, views out of the RHPG are not a particular feature of it. It is more self-contained, with structural landscape elements, such as formal avenues providing interest and attraction within the designated site itself. There is a dispute about the extent of the setting of the RHPG, with general agreement that it extends to the north of Rugby Road, but not to how far, or to whether it should include the skyline. I consider that the setting of the RHPG includes its surroundings insofar as they provide local context that relates to, and complements the appreciation and understanding of, the RHPG. In this regard setting could be influenced by the extent to which a material change within it could affect the significance of the RHPG. EH is concerned that the turbines would in some views over the RHPG be seen breaking the horizon. I do not consider that the skyline here is of much importance to the setting of the RHPG, because it is no more than a skyline typical of a rural landscape, which does not add significantly to the appreciation of the RHPG. [15,32,54,56,97,106,107,110,111,112,137,138]
199. There is evidence of some historic associations between the RHPG and the land north of Rugby Road, which include the continuation of the gated road, still with its parkland style gates. It seems to me that there is also something of a landscape link that derives from the continuation of the shallow valley between Hovel Hill and Gravel Hill northwards, along with its sloping valley side up to Verney Spinney. I believe that this area north of Rugby Road, because of its historic associations and landscape form, does to some degree, enhance

appreciation of the RHPG. This relationship might not be immediately apparent to those travelling by car along Rugby Road. Nonetheless, I consider that it is a meaningful relationship that would be appreciated by those familiar with the features and characteristics of historic parklands. Furthermore, the association would be more readily appreciated by those walking or riding the gated road. I find, therefore, that the setting of the RHPG extends to the north of Rugby Road beyond that identified by Nuon, and encompasses the sloping land leading up to Verney Spinney. [15,54,108-111,140,141,149]

200. WT6 and WT9 would be prominent features in views from the northern parts of the RHPG. WT9 would be sited on the slope below Verney Spinney. I consider that a structure 125 m high in this location would materially detract from the legibility of the associative relationship between the RHPG and its surroundings. I do not consider that the same issue would arise with WT6, because the topography and relationship with the RHPG is different. EH is concerned that the turbines would be clearly apparent from the road through the historic park. In my view, the other proposed wind turbines, although visible from vantage points within the RHPG would be set back a sufficient distance so as not to adversely impact on the RHPG itself or its setting. In my judgement, WT9 would to some degree, have a detrimental effect on the setting of the RHPG because of its siting and size. However, it would only affect a limited part of the RHPG's overall setting. Nonetheless, it would be at odds with the underlying aims of LP Policy EV/18 which, amongst other things, seeks to protect the setting of historic parks and gardens from new development which would harm their historic interest. This is a consideration which weighs against allowing the appeal. However, I find no substance in the submission that the appeal scheme would undermine the investment programme in the RHPG, nor would allowing the appeal in the particular circumstances which apply here establish any precedent to be followed elsewhere. [23,32,113,114,120,121,140]

201. There is evidence that the Stormsworth DMV extends beyond the boundaries of the SAM, and in accordance with the advice in PPG16 there is a presumption in favour of the physical preservation of the important archaeological remains and their setting. The photomontages and wireframes at Figs.24.a-i in Document N(LV)18 indicate that the proposed turbines would be dominant features in the outlook from the DMV. However, this does not necessarily indicate harm to the setting of the DMV. The hollow-way and other 'humps and bumps' that comprise the DMV do not make much of a visual impact on the landscape, but I do not consider that the setting of the DMV should be determined by such visual factors, or the effects on the skyline. In terms of its archaeological significance the SAM designation states that the site provides important information on the diversity of medieval settlement patterns and farming economy. These are matters, which it seems to me, fall to be considered in a wide context. Relevant factors might include the pattern of ridge and furrow in the wider locality, along with the DMV's relationship with the local topography and streams, and historic access routes, which here might include a Roman road. [14,57,115-118,156,149]

202. On this basis, the setting of the DMV that would be likely to be of interest to historians and archaeologists might encompass an extensive area. However, the proposed wind turbines would not adversely affect any of the factors outlined above which would be likely to inform the historic context of the DMV, in terms of medieval settlement patterns and the farming economy. For archaeologists and others interested in the DMV, I do not consider that the proposed turbines would

significantly detract from their appreciation of the archaeological significance of the DMV itself or its historic context. I do not, therefore, consider that the proposed wind farm would have an unacceptable adverse effect on the setting of the DMV. I find no conflict in this regard with the guidance in PPG16 concerning the physical preservation of nationally important archaeology and its setting. [24,98]

203. The proposed turbines would be visible, in views from Stanford Mear and nearby bridleways, on the ridge, beyond the Grade 1 listed church of St Nicholas at Stanford on Avon. However, this attractive church lies in a depression between ridges, and so its low tower is seen nestled amongst the trees that from this vantage point appear as a heavily wooded belt along the ridge slope. The church is set well below the skyline and, in this context, I do not consider that the proposed wind farm would unduly affect its setting or significantly detract from its appearance. The tall spire of St Nicholas church at South Kilworth is a prominent skyline feature, but there are few vantage points where it would be seen directly in front of the proposed wind farm. Where the spire appeared to be set to one side of, or behind, the proposed wind farm, I do not consider that such juxtaposition would unduly affect the church's setting or significantly diminish its impact in the wider landscape. [139]
204. There are many other listed buildings and structures in the vicinity of the appeal site. Their settings are generally confined to their immediate surrounds or the local streetscape. I do not consider that the proposed wind farm would adversely impact on the setting of the other listed buildings to which I was referred. The turbines would be visible from some parts of Swinford Conservation Area, particularly its eastern projection along the avenue of trees. However, these would be at some distance, and seen beyond Rugby Road. I do not consider that the turbines would harm the character or appearance of, or views into and out of, the conservation area. The proposed wind farm would not adversely affect views into or out of the Grand Union/Oxford Canal Conservation Area because of the considerable separation distance. [17,33,51,134,139,]

### *(3) Noise*

205. PPG24 notes that much of the development necessary for essential infrastructure will generate noise, and that the planning system should not place unjustifiable obstacles in the way of such development. However, it adds that development should not cause an unacceptable degree of disturbance. PPS22 provides that RE developments should be located and designed in such a way so as to minimise increases in ambient noise levels. It states that ETSU should be used to assess and rate noise from wind energy development. PPS22CG endorses the recommendations in ETSU as relevant guidance on good practice. ETSU is not to be interpreted as statute or applied inflexibly, especially as the document describes a framework for the measurement of wind farm noise and gives indicative noise levels thought to offer a reasonable degree of protection to wind farm neighbours, without placing unreasonable restrictions on wind farm development or adding unduly to the costs and administrative burdens of developers or local authorities. The noise limits set out in ETSU are fixed limits of  $L_{A90,10min}$  35-40 dB during the day and 43 dB during the night (with higher limits for dwellings with a financial interest in the scheme), or 5 dB above the prevailing background level, whichever is the greater. [24,64]

206. Determination of background levels at various wind speeds is, therefore, an important element in the assessment. SSWFAG does not consider the noise assessment undertaken to be sufficiently robust. It is critical, amongst other things, about the lack of information on measurement locations and the removal of data for public holidays, which effects the available distribution of wind speed and direction. I am not convinced that these criticisms invalidate the background noise assessments. Additional information might have aided transparency, but there is no compelling evidence that the measurements made are not reasonably representative. Predicted noise levels for improvements to the Catthorpe junction indicate that some properties in Swinford would be likely to benefit from a noticeable decrease, whilst others are predicted a significant increase. This does not provide much assistance in drawing conclusions about ambient noise levels in the locality. [66,67,126,155]
207. I am satisfied that appropriate allowance has been made for wind shear, and a condition to address any unacceptable amplitude modulation of aerodynamic noise (AM) has been suggested. I acknowledge that turbine noise might, at times, be audible above background levels, and so detract from the amenity currently enjoyed by those living or working in, or visiting, this part of the countryside. However, I do not consider that there are any exceptional or special circumstances in this case which would indicate that the balance between the protection of neighbours from wind turbine noise and encouragement for wind farm development should be drawn differently from that indicated in ETSU. [65-69,154]
208. SSWFAG, local residents and medical practitioners are particularly concerned about the effects of wind turbine noise on the health of nearby occupiers because of its effect on sleep. Medical research on sleep deprivation which post-dates ETSU and PPS22, is a material consideration. Noise can disturb sleep by arousals, which are brief awakenings that are not remembered, and SSWFAG stresses that all research to date has only measured remembered awakenings, and so has grossly underestimated the impact of turbine noise on sleep. In SSWFAG's submission industry and Government reports, which seek to show that there is no problem, are unconvincing. However, SSWFAG acknowledges that much of the research indicating that turbine noise emissions cause sleep disturbance and ill health is not of the highest standard. Nuon points out that this research is difficult to square with the WHO Guidelines. [71,72,74,151,152,153]
209. Notwithstanding the many references cited and the research papers discussed at the Inquiry, some of which are peer reviewed, I consider that the evidence falls short of establishing a causal link between wind turbine noise emissions and impaired health of nearby occupiers that would justify dismissing this appeal. There is considerable local anxiety and fear about wind turbine noise, but, irrespective of whether this is rational or irrational, I do not believe that it is a consideration which should be given much weight in determining this appeal. Nor, in my view, are there reasonable grounds for invoking the precautionary principle, because I am not convinced that the evidence adduced demonstrates good reason to believe that harmful effects may occur to human health. The prevalence of complaints does not by itself indicate that the precautionary principle should be applied. [74,97]
210. There is concern that ETSU might not properly assess the phenomenon of AM. However, I am satisfied that in this case an appropriate condition was devised

and agreed at the Inquiry, which if imposed would reasonably address any unacceptable AM. I share Nuon's reservations about the stand-off distances advocated by SSWFAG. I do not consider that these are justified by the research cited, and find no reason to impose a greater separation distance between dwellings and the proposed wind turbines than that which would be required to secure compliance with ETSU. I find no grounds to reject the proposal because of noise or health considerations. [68,70,73,154,166]

211. In my view, the proposal would not cause an unacceptable degree of noise disturbance, and so would not conflict with the advice in PPG24. Subject to the imposition of appropriate planning conditions, I am satisfied that the scheme would minimise increases in ambient noise levels for this type of development, and so would accord with the guidance in PPS22. [172,173]

*(4) Archaeological remains*

212. A detailed gradiometer survey was conducted across targeted areas on the appeal site. This detected a number of anomalies of possible archaeological potential. Trial trenching would be necessary as a preamble to the design of an appropriate mitigation strategy, but the scheme incorporates some capacity to accommodate variation in layout. This, along with the character of the remains detected via the recent survey, gives confidence that an acceptable mitigation solution could be secured by condition. On this basis HDC resolved not to defend its third putative reason for refusal. There is nothing to indicate that an unacceptable effect on archaeological remains would weigh against permitting the proposal. [9,76,156]

*(5) Nature conservation*

213. There is some local concern about the effects of the proposal on wildlife and particularly migratory birds. However, assessments considered protected species and other wildlife, along with cumulative impact, and the effects of the proposal were assessed to be not significant. Minor negative effects during construction could be minimised by a condition requiring an approved construction method statement. The suggested conditions also include a habitat management plan, and provision for the monitoring of bird and bat strike. NE has no objection to the proposal. Subject to the imposition of appropriate conditions, I find no reason that harm to wildlife or nature conservation would significantly weigh against the proposal. [34,35,77,125,175]

*(6) Living conditions of local residents*

214. The fact that the proposed turbines would be prominent from a number of dwellings is not, in HDC's submission, determinative in itself. The appellant's landscape assessment found significant effects on views in 44 locations out of the 63 assessed. SSWFAG considers this to be an underestimate that does not give appropriate consideration to dwellings within nearby settlements. However, this landscape assessment does not, to my mind, provide an appropriate basis for determining whether the proposed development would have an unacceptable effect on the living conditions of occupiers by reason of its visual impact. The nearest occupied dwellings that would not have a financial interest in the proposed wind farm would be located about 670 m from the nearest turbine. The cross-section drawn between the dwelling at Poplar's Farm and WT7 is typical of the relationship that would exist for properties located close to the proposed wind farm. This indicates that the outlook from the dwelling and its amenity space

would be significantly altered. However, this is not a decisive consideration. In my view, the issue is whether the number, size, layout and proximity of wind turbines would have such an overwhelming and oppressive visual impact on a dwelling and its garden that they would result in unsatisfactory living conditions and so unacceptably affect amenities and the use of land and buildings which ought to be protected in the public interest. [28,48,95,124,145-148]

215. However, wind turbines are slender structures and the wireframes indicate that their layout would provide substantial visual breaks or gaps between turbines through which the open countryside and sky would be apparent. For example, at Poplar's Farm the proposed turbines would be spread across the south-east/south-west quadrant, but their separation would provide scope for trees to provide some screening, especially of the more distant turbines. WT7 and WT4 would be prominent from windows and amenity space, and their movement would attract attention, but there would be a wide gap between these tall structures which would give substantial views of open countryside between the turbines. In my judgement, these turbines would not be so high or so close to Poplar's Farm that they would have an unacceptable dominating impact. A similar argument applies to other dwellings that would be sited near to the proposed wind farm. I do not consider that the proposal would have an unacceptable overbearing or oppressive effect on nearby dwellings that would adversely affect the living conditions of occupiers.
216. There is local concern about the effects of shadow flicker. However, an assessment has been undertaken, which indicates to me that this is a matter which could be reasonably dealt with by the imposition of appropriate conditions. [75,126,148,175]

*(7) Other considerations*

217. Representations were made about a poor wind resource and inadequate wind data. This is not borne out by the findings of a study commissioned by the local authorities, which reported that Harborough District offers the greatest potential for wind energy, with a good wind resource as well as available area for siting of larger wind turbines. However, I do not consider that the identification of a 'potential wind site' 2 km from South Kilworth should be given much weight in determining this appeal, because it emerged from a broad assessment that did not consider in any detail local landscape or cultural heritage issues. [40,157,175]
218. There are local concerns about air safety, but these are not shared by the relevant aviation authorities. I am satisfied that appropriate consultation has been undertaken and note that there is no objection from the CAA or NATS. It is not clear on the evidence available whether aviation safety lighting would be required, but if this were so, I do not consider, subject to an appropriate design, that it would unduly impact on the landscape or result in unacceptable light pollution. [36,59]
219. There are no objections to the proposal from those bodies responsible for the highway network. There is local concern about road safety, but this is not supported by evidence of any specific problems with the network that is apparent in the accident record. Special measures would be necessary to accommodate the movement of such large structures, but these are matters which could be addressed by condition. There is no compelling evidence that the wind turbines

- would distract drivers either on nearby local roads or the more distant M1 and A14. [27,31,125,159]
220. Appropriate consideration has been given to the electricity transmission line and gas pipeline, which traverse the site. There is no objection from the relevant safety authorities. Local concerns about ice throw and blade failure do not, in my view, take proper account of the sophisticated control systems installed to detect asymmetric blade loads. I do not consider that the appeal scheme would result in any unacceptable hazard or safety risk. [19,77,126,172]
221. Some of the proposed turbines would be sited near to routes used by equestrians, and within the four times their height separation distance recommended by BHS. There is local concern about moving shadows from blades and the sheer size of the structures upsetting horses and putting riders at risk. However, it is difficult to reconcile these strongly held views with written representations submitted by other equestrians, about an existing wind farm, which do not indicate any problems with riding near to wind turbines. I understand the local apprehension about the effects on horses, but prefer the evidence about the impact of an existing wind farm. I find that the likely effects of the proposed turbines on the safety of horses and riders are not a consideration which weighs significantly against the proposal. [13,77,125,150]
222. The scheme would have a limited duration of 25 years, but this would be a substantial period for those who would have to endure any adverse effects from the proposed wind farm. I acknowledge that this is a short period by comparison with the age of the historic assets in the locality, and that any harm would not be permanent. I also note that PPS22 paragraph 20, with regard to visual and landscape effects, states that these may be temporary if conditions require de-commissioning. However, these considerations would be unlikely to provide much solace for those adversely affected by the wind farm for the duration of its lifetime. I do not, therefore, consider that the reversibility of the scheme should be an influential factor in determining this appeal. [26,60,62,95,144]
223. Disturbance during construction could be minimised by the imposition of appropriate conditions. There is no objection from the EA concerning the effects on water courses or resources. I have taken into account all other matters raised in evidence, including concerns about the effects on tourism, school rolls, livestock, TV and radio reception, but have found nothing to outweigh the main considerations that lead to my conclusions. [30,77,126,175,176]

*(8) Policy considerations*

224. The development plan for the area includes the East Midlands Regional Plan, March 2009 (RSS8), and saved policies of the Harborough District Local Plan, adopted 2001 (LP). There are no relevant saved structure plan policies. [20,23]
225. The harm I have identified to the local landscape would bring the proposal into conflict with LP Policy EV/5, which presumes against development that would adversely affect the character and appearance of the countryside. It would also, on this ground, be at odds with the guidance in PPS7, which provides that the quality and character of the wider countryside should be protected and, where possible, enhanced. I do not consider that the proposed turbines would adversely affect the setting of Stanford Hall, and so find no conflict with LP Policy EV/16. However, if the SoS were to determine that the appeal scheme would have an adverse impact on the historic skyline of Stanford Hall, then the

resultant harm would bring the proposed development into conflict with the aims of LP Policy EV/16, because it would not respect the setting of the Grade I listed building. On this basis, the scheme would not be consistent with the guidance in PPG15. My finding that the proposal would, to some extent, harm the setting of the RHPG means that the scheme would be contrary to the underlying objectives of LP Policy EV/18, insofar as it encourages the protection of such sites and their settings from new development which would harm their historic interest. I find no conflict with other LP policies cited dealing with noise, impact on the road network and habitat protection. [23,24]

226. The extent to which the appeal scheme squares with the provisions of RSS8 is not so straightforward. The harm I identify to the setting of the RHPG would conflict with the provisions of RSS8 Policies 27 and 31 concerning the historic environment and heritage landscapes. This might also point to conflict with Policy 26 concerning the protection of cultural heritage, which would be even greater if the SoS were to find harm to the setting of Stanford Hall, as outlined above. Policy 26 sets out principles to be applied, including; that nationally designated historic assets should receive the highest level of protection; that damage to historic assets or their settings should be avoided wherever and as far as possible, recognising that such assets are usually irreplaceable; unavoidable damage must be minimised and clearly justified by a need for development in that location which outweighs the damage that would result; there should be a net increase in the quality and active management of historic assets in ways that promote adaptation to climate change, and an increase in the quality of environmental assets generally. However, this implies a balancing exercise. [21,122,123]

227. The scheme would generate RE that would make a significant contribution towards achieving the targets set out in Policy 40. The proposal would gain substantial support from the provisions of Policy 40 in terms of achieving environmental objectives on climate change if its environmental, economic and social impacts could be addressed satisfactorily. The balance inherent within this policy is expressed more explicitly in the various core objectives set out in Policy 1, which aim to protect and enhance the environment, to reduce the causes of climate change by minimising emissions of CO<sub>2</sub> in order to meet the national target through maximising the level of RE generation and other measures. Given the tensions between different policies within RSS8, it seems to me that the determination as to whether the appeal scheme accords with RSS8, when properly read as a whole, would depend on the outcome of the balancing exercise between benefits of the scheme and any resultant harm, which I consider below. [20,22,86-89,122,131,161,162]

228. The fact that PPS22 provides that specified RE targets are a minima is not particularly relevant here, where there is a significant shortfall in provision compared with the targets. I concur with Nuon that the need is unconstrained and that RE generation needs to be brought forward wherever it can be, subject to its being acceptable when the overall balance is properly drawn. [80,81,171]

229. HDC considers that the proposed scale, arrangement and siting of the development have not been demonstrated to be avoidable with reference to alternatives, and submits that smaller or fewer turbines would have less impact on cultural heritage assets. Given the unconstrained nature of the need, Nuon believes that no one RE scheme can be regarded as an alternative to another, and that there is no requirement to provide a menu of different layouts, designs,

size or number of turbines. Lord Justice Carnwath in the *Carsington* judgment refers to PPS22 principle 1(viii), which provides that development proposals should demonstrate any environmental, economic and social benefits as well as how any environmental and social impacts have been minimised through careful consideration of location, scale, design and other measures. He accepted that “careful consideration of location” may be said to imply a need for the developer to be able to demonstrate the particular merits of the selected site, but considered that it was far from requiring the decision-maker in every case to review potential alternatives as a matter of obligation. [44,58,127,128,143]

230. This is not a proposal for which only one or at least only a limited number of permissions could be granted. If an environmentally preferable alternative site were to be available, it seems to me that an argument might be advanced for the development of both sites, if this was necessary to achieve policy objectives and impacts could be satisfactorily addressed in both cases. I consider that Nuon is correct that even were it the case that smaller or fewer or differently laid-out turbines might have a lesser impact, that is not a reason for refusal. What is relevant is not whether, following the various design iterations, the appeal scheme has adverse effects, but whether any such remaining adverse effects would be outweighed by the benefits. Paragraph 1(viii) of PPS22 refers to a balance between benefits and impacts, and requires the latter to be minimised. In my view, this means firstly that harm would need to be minimised to the extent that it was outweighed by the benefits; and secondly, that any measures to minimise harm, which could reasonably be achieved without diminishing the benefits of the proposal, should be adopted. The objections to the proposal in this case do not raise any specific issues relevant to the second point. In my view, compliance with PPS22 is therefore a matter of balance, which I deal with below, but in the circumstances which apply here, I do not consider that there is any requirement to assess alternative sites or configurations for the proposed wind farm. [82,128,130,132,143,158,164,166,167]

231. As a RE project the proposal would accord with a key part of the strategy to tackle climate change and deploy cleaner sources of energy as set out in *Meeting The Energy Challenge A White Paper on Energy* CM 7124. It would, cumulatively, make a significant contribution to the target which aims to see renewables grow as a proportion of electricity supplies to 10% in 2010, with an aspiration for this level to double to 2020. The proposal benefits from the provision in The White Paper that significant weight should be given to individual renewable projects which are part of a growing proportion of low-carbon generation that provides benefits shared by all communities both through reduced emissions and more diverse supplies of energy, which would help the reliability of supplies. The scheme’s implementation would gain some support from the conclusions of the *Stern Report* that early action to minimise long-term costs is a significant factor in terms of economic considerations. However, national energy policy is not an overriding consideration. The White Paper provides that the planning system must balance this against the full suite of planning policy statements when assessing the need for and the environmental consequences of a project. [84,85,94,119,169,170,171]

#### (9) *Planning balance*

232. I turn next to whether the environmental and economic benefits of the appeal scheme would be sufficient to outweigh any harm that might be caused. I deal first with the harm I have identified. [119]

233. The proposed wind farm would result in some harm to the local landscape, which would conflict with local and national policy for the countryside. For the reasons set out above, I do not consider that the proposal would harm the setting of either Stanford Hall or Stormsworth DMV. If the SoS were to reach a different conclusion about a historic skyline at Stanford Hall, then some harm would result to the Grade I listed building, which would conflict with the guidance in PPG15. I have found that WT9 would have a detrimental effect on the setting of the RHPG, which would be contrary to the underlying aims of a relevant LP policy. As indicated above, I find no harm to other features of cultural heritage in the locality. I am satisfied that noise from the proposed wind farm could comply with the indicative limits in ETSU. Below these limits the Government does not consider, having regard to, amongst other things, the costs on wind farm developers, that wind farm noise would be unreasonable to neighbours. I do not, therefore, find that noise or health considerations weigh against the proposal. No unacceptable effects on archaeological remains or wildlife need to be weighed in the balance. I have not found that the appeal scheme would unduly affect the residential amenity of those residing in the locality by reason of its adverse visual impact or shadow flicker. I do not consider that other issues raised by objectors substantially weigh against allowing the appeal.
234. Against this harm must be weighed the RE benefits of the appeal scheme to carbon mitigation and climate change objectives. PPS22 provides that the wider environmental and economic benefits of all proposals for RE projects, whatever their scale, are material considerations that should be given significant weight in determining whether proposals should be granted planning permission.
235. Policy for RE cascades down through international and European obligations, to national and regional levels. RSS8 Policy 40 supports low carbon energy proposals in locations where environmental, economic and social impact can be addressed satisfactorily, so as to achieve indicative regional targets of 122 MWe in 2010 and 175 MWe for 2020/2026 for On-shore Wind, compared with a current capacity of 54 MWe. With each turbine having a power output of 2.5 MW Nuon expects an annual electricity generation equivalent to the average needs of approximately 14,000 homes. Professor Twidell considers that it would be equal to the electricity used by 11,000 typical households. He notes that the proportion of energy from renewables in the East Midlands is about 1%, significantly less than the UK average, and is mostly from landfill gas. The East Midlands Regional Assembly notes that the proposal would meet about 23% of the 2010 regional target. This indicates to me that the appeal scheme would, both by itself and cumulatively, make an important contribution to reducing the current shortfall against the regional target. [22,26,29,78,79,80,91,93,94]
236. The *Stern Report* emphasizes the importance of early action. This supports the views of those who made submissions about the need for renewables to quickly replace aging fossil fuel power plants, and for there to be urgent action to tackle climate change. No one contends that the appeal proposal does not attract significant weight by reason of the contribution which it would make to important national objectives. HDC acknowledges the considerable significance of the generic benefits of the appeal scheme. SSWFAG records that it would provide up to 16% of the energy consumption of the District if its projected load factor was achieved, and accepts that this would be a very useful contribution, which would assist security/diversity of supply and CO<sub>2</sub> reduction. However, both HDC and SSWFAG argue that this is common to all RE projects, and that the issue which

arises is where such wind energy projects should be located. I do not consider that this argument detracts from the substantial weight which should properly be attributed to the RE benefits of the appeal scheme.

[84,85,91,92,97,119,130,162,168,169]

237. In my judgement, the significant benefits of RE generation in this case outweigh what I consider would be the limited harm to the local landscape and to the setting of the RHPG, and the resultant policy conflict. The RE advantages in this case are so substantial, in my view, that they would be sufficient to also outweigh the additional harm that would arise were the SoS to find an adverse impact on Stanford Hall by reason of a modest change to its historic skyline. I find that the planning balance here falls in favour of granting planning permission. [59,63,83,90,96,98,127,132,163,164,168,169,170-174]

#### *(10) Conditions*

238. A five year commencement period was suggested. I consider that this would be reasonable in the circumstances, having regard to the uncertainty about a grid connection, along with the current economic climate. In my view the conditions agreed at the Inquiry, with some minor alterations in the interests of precision and enforceability, would be necessary to mitigate the impact of the proposed development. In particular, condition 17 could be drafted with greater clarity, and it would not be necessary provide for a review 'within six months prior to the expiry of planning permission'. In the last part of suggested condition 19, which refers to other dwellings, I consider that the reference to 'unless otherwise requested by the local planning authority' would not give the required certainty and should be deleted. I consider that an addition to condition 24 would be necessary to specify that the assessment was undertaken at the operator's expense. I am satisfied that the suggested conditions would reasonably relate to the proposed development. In my view they would appropriately address some of the issues raised by third parties. [177-184]

#### *(11) Overall conclusions*

239. There is considerable local opposition to the proposed development, which is evident from the written representations, petitions and the submissions to the local planning authority and to the Inquiry. This stems from genuine concerns for the well-being of the local community, which were expressed with conviction and sincerity at the Inquiry. [172,175,176]

240. However, the appeal falls to be decided having regard to the development plan, and should be determined in accordance with it, unless material considerations indicate otherwise. I have found that the proposal would conflict with specific provisions of the LP. However, my view that there is an overall balance in favour of the scheme, renders the proposal compliant with RSS8, when read as a whole. It would also on this basis accord with the guidance in PPS22, and the strategy set out in the Energy White Paper. In my judgement, the benefits of the proposed development would be sufficient to outweigh the harm and policy conflict. I conclude that the appeal should be allowed and that planning permission should be granted, with appropriate mitigation measures, as outlined above, and set out in full in the Schedule of Conditions, along with the list of application plans, included in this report.

## **Recommendations**

241. I recommend a finding that the Environmental Statement reasonably complies with the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999, and that sufficient information has been provided to assess the environmental impact of the appeal proposal.
242. I recommend that the appeal be allowed and planning permission be granted for the construction and operation of a wind farm consisting of eleven 125 m turbines, control building, temporary construction compound, anemometer mast, vehicular access, accommodation works and tracks at land north-east of Swinford, subject to the conditions set out in the attached Schedule of Conditions.

*John Woolcock*

Inspector

## SCHEDULE OF CONDITIONS 1-30

1. The development hereby permitted shall be begun before the expiration of five years from the date of this permission. Written confirmation of the date of the first export of electricity to the grid from the wind farm hereby permitted shall be provided to the local planning authority within one month of the date of this taking place.
2. The planning permission hereby granted is for a period from the date of this decision until the date occurring 25 years after the date of the first export of electricity to the grid from the wind farm hereby permitted, when the use shall cease and the turbines, control building, temporary construction/decommissioning compound and anemometer mast shall be removed from the site in accordance with Condition 17.
3. Each turbine and its site track shall be provided in the position indicated on Figure 4.1 subject to a micro-siting allowance of 50m. Any variation of the indicated position on Figure 4.1, within the micro-siting allowance, shall only be permitted following prior written approval by the local planning authority.
4. No development hereby permitted shall commence until full details of the turbines including their colour, finish, air safety lighting and the warranted sound power level have been submitted to and approved in writing by the local planning authority. The development shall thereafter be carried out in accordance with the approved details.
5. Prior to the erection of any of the turbines hereby permitted, details of the control building, temporary construction compound and anemometer mast, shall be submitted to and approved in writing by the local planning authority. The development shall thereafter be carried out in accordance with the approved details.
6. No development shall commence until a scheme for the investigation and alleviation of electromagnetic interference, including to television reception, caused by the turbines hereby permitted, has been submitted to and approved in writing by the local planning authority. The approved mitigation measures shall be carried out in accordance with a timescale approved in writing by the local planning authority.
7. No development shall commence until a scheme for the investigation and alleviation of shadow flicker caused by the turbines hereby permitted, has been submitted to and approved in writing by the local planning authority. The approved mitigation measures shall be carried out in accordance with a timescale approved in writing by the local planning authority.
8. Prior to the commencement of any works a Construction Method Statement shall be submitted to and approved in writing by the local planning authority. This shall include details relating to:
  - (i) The control of noise and vibration emissions from construction activities including groundwork and the formation of infrastructure, along with arrangements to monitor noise emissions from the development site during the construction phase.
  - (ii) The control of dust including arrangements to monitor dust emissions from the development site during the construction phase.

- (iii) Measures for controlling pollution/sedimentation and responding to any spillages/incidents during the construction phase.
- (iv) Measures to control mud deposition offsite from vehicles leaving the site.
- (v) The location and size of temporary parking, lay down and compound areas.
- (vi) The control of surface water drainage from parking and hard-standing areas including the design and construction of oil interceptors (including during the operational phase).
- (vii) The use of impervious bases and impervious bund walls for the storage of oils, fuels or chemicals on-site.
- (viii) Replanting plans for turbine bases and crane operation areas subsequent to construction.
- (ix) Details of the reinstatement of any areas of the site which may have been disturbed during construction.
- (x) The means by which users of public rights of way would be protected during the construction period.

Development shall be carried out in compliance with the approved Construction Method Statement, unless otherwise approved in writing by the local planning authority in advance.

9. All construction and decommissioning works shall be carried out only between the hours of 07:00 to 19:00 Monday to Friday, 07:00 to 16:00 Saturdays and at no times on Sundays and Bank Holidays unless prior written approval has been obtained from the local planning authority. Notwithstanding the hours stated above, the local planning authority may approve in writing deliveries outside these hours on prior application from the developer.

10. No development shall take place until a habitat management plan, including long term ecological objectives, management regime and maintenance schedules has been submitted to and approved in writing by the local planning authority. The plan shall include for the provision of 300 m of new hedging together with the replacement of any hedgerows and trees lost as a result of the development. It shall also include provision for the management of existing ponds and the provision and maintenance of rough grassland. The approved habitat management plan shall be implemented within the first twelve months following the cessation of construction and shall be reviewed at five yearly intervals. Changes to the habitat management plan shall only be made with the prior approval in writing by the local planning authority. The measures included within the approved habitat management plan shall continue throughout the lifetime of the planning permission hereby granted.

11. No development shall take place within the application area until the applicant has secured the implementation of a programme of archaeological work, comprising a staged programme of archaeological mitigation which shall include, as necessary, provision for exploratory trenching, preservation in situ of archaeological remains and/or appropriate excavation and recording. This work shall be undertaken in accordance with a written scheme of investigation which has been submitted to and approved in writing by the local planning authority.

12. The temporary access to facilitate delivery of the turbine components shall be implemented in accordance with Drawing No. 22991 – R01 Rev B, unless otherwise approved in writing by the local planning authority in advance. The development shall only proceed in accordance with the approved details.

13. Before the development hereby permitted commences, a Transport Management Plan shall be submitted to and approved in writing by the local planning authority.

The Transport Management Plan shall include details of:

(i) The management and routing of construction traffic.

(ii) Delivery times.

(iii) Internal compound and wheel washing arrangements.

(iv) The timing of and means by which the temporary access and road shown hatched grey on drawing number 22991 – R01 Rev B will be stopped up. The sub-base of both the access and the road may be retained during the life of the permission and both the access and the road may be temporarily reopened and used with the prior written approval of the local planning authority.

The Transport Management Plan shall be implemented for the whole of the construction period.

14. Notwithstanding the details submitted, prior to commencement of the development hereby permitted, details of the vehicular access to the site shall be submitted to and approved in writing by the local planning authority. This shall include details about the siting, geometry, visibility splays, surfacing and any gates. Vehicular access to the site shall be implemented in accordance with the approved details prior to commencement of development.

15. Prior to commencement of development, details of parking facilities for maintenance, servicing or repair vehicles for the 25 year duration of the facility hereby permitted shall be submitted to and approved in writing by the local planning authority. These facilities shall be fully implemented prior to the first use of the turbines and retained for the duration of this planning permission.

16. Prior to the commencement of development, details of post-construction monitoring of bird and bat strike to be conducted shall be submitted to and approved in writing by the local planning authority. The aforementioned monitoring shall then be carried out in accordance with the approved details, and the results shall be submitted to the local planning authority in accordance with an approved timescale.

17. Not less than one year prior to the expiry of this planning permission a Decommissioning Method Statement shall be submitted for the written approval of the local planning authority. This shall include details of all site decommissioning works, including how wind turbines and ancillary equipment would be dismantled and removed from the site, the depth to which wind turbine foundations shall be removed below ground level, along with details of site restoration and a timetable of works. The Decommissioning Method Statement shall be carried out as approved.

18. Prior to the commencement of development, details shall be provided to the local planning authority of the bond or other financial provision to be put in place to cover all decommissioning and site restoration costs on the expiry of this planning permission. No work shall commence on the site until documentary evidence that the proposed bond or other financial provision is in place has been provided and written confirmation has been given by the local planning authority that the proposed

bond or other financial provision is satisfactory. The applicant, or their agent or successors in title shall ensure that the approved bond or other financial provision is maintained throughout the duration of this consent and the bond or other financial provision will be subject to a five yearly review from the commencement of the development, to be conducted by a competent independent professional approved in writing by the local planning authority who has relevant experience within the wind energy sector, and provided to the applicant, or their agent or successors in title, the landowner(s) and the local planning authority.

19. The rating level of noise emissions from the combined effects of the wind turbines (including the application of any tonal penalty) when calculated in accordance with the attached Guidance Notes 1-4 shall not exceed the noise values set out in Tables 1 & 2 within the Guidance Notes. Noise limits for properties within 2 km of a wind turbine, which lawfully exist or have planning permission for construction at the date of this planning permission, but are not listed in these tables, shall be those of the nearest location listed in Tables 1 & 2.

20. Within 28 days from the receipt of a written request from the local planning authority following a complaint to it, the wind farm operator shall, at its own expense, employ an independent consultant approved in writing by the local planning authority to assess the level of noise emissions from the wind farm at the complainants property following the procedure described in the attached Guidance Notes. Details of the assessment and its results as to whether a breach of the noise limits in Condition 19 has been established shall be reported to the local planning authority as soon as the assessment is completed.

21. Upon notification in writing from the local planning authority of an established breach of the noise limits in Condition 19 the wind farm operator shall, within 28 days propose a scheme to the local planning authority to mitigate the breach to prevent its future occurrence, including a timetable for its implementation. Following the written approval of the scheme by the local planning authority it shall be activated forthwith and thereafter retained.

22. Wind speed, wind direction and power generation data for each wind turbine shall be continuously logged and provided to the local planning authority at its request and in accordance with the attached Guidance Notes within 28 days of such a request. Such data shall be retained for a period of 5 years.

23. Prior to the commencement of development, details of a nominated representative for the development to act as a point of contact for local residents (in connection with conditions 19 - 24) together with the arrangements for notifying and approving any subsequent change in the nominated representative shall be submitted to and approved in writing by the local planning authority. The nominated representative shall have responsibility for dealing with any noise complaints made during construction, operation and decommissioning of the wind farm and liaison with the local planning authority.

24. On the written request of the local planning authority, following a complaint to it considered by the local planning authority to relate to regular fluctuation in the turbine noise level (amplitude modulation), the wind farm operator shall at its expense employ an independent consultant approved in writing by the local planning authority to undertake the additional assessment outlined in Guidance Note 5 to

ascertain whether amplitude modulation is a contributor to the noise complaint as defined in Guidance Note 5. If the said assessment confirms amplitude modulation to be a contributor as defined in Guidance Note 5, the local planning authority shall request that within 28 days of the completion of the noise recordings referred to in Guidance Note 5, the developer shall submit a scheme to mitigate such effect. Following the written approval of the scheme and the timescale for its implementation by the local planning authority the scheme shall be activated forthwith and thereafter retained.

25. No lighting, symbols, signs or logos or other lettering, other than those required for health and safety, traffic management or aviation safety, shall be displayed on any part of the turbines or any other building or structures without the prior written approval of the local planning authority.

26. All cables within the development site between turbines and from the turbines to the substation shall be set underground.

27. The number of turbines shall not exceed 11. The blade tip height of turbines shall not exceed 125 m in height. The hub height of the turbines shall not exceed 84 m and shall not be less than 76 m.

28. All turbine blades shall rotate in the same direction.

29. If any of the wind turbines hereby permitted ceases to operate for a continuous period of 6 months then, unless otherwise approved in writing by the local planning authority, a scheme for the decommissioning and removal of the wind turbine and any other ancillary equipment and structures relating solely to that turbine, shall be submitted to and approved in writing by the local planning authority within 3 months of the end of the 6 month cessation period. The scheme shall include details for the restoration of the site. The scheme shall be implemented and site restoration completed within 12 months of the date of its approval by the local planning authority.

30. No development shall commence on site until the Ministry of Defence has been provided with the following information:

- (i) The date of commencement of the construction.
- (ii) The height above ground level and the location of the tallest structure.
- (iii) The maximum extension height of any construction equipment.
- (iv) Details of site lighting.

Guidance notes relating to conditions on next page -

## GUIDANCE NOTES RELATING TO NOISE CONDITIONS

These notes are to be read with the planning conditions covering operational noise. They further explain these conditions and specify the methods to be deployed in the assessment of any complaints about noise emissions from the wind farm.

### NOTE 1

(a) Values of the  $L_{A90,10min}$  noise statistic should be measured at the complainant's property, using a sound level meter of IEC 651 Type 1, or BS EN 61672 Class 1, standard (or the equivalent relevant UK adopted standard in force at the time of the measurements) set to measure using a fast time weighted response. This should be calibrated in accordance with the procedure specified in BS 4142: 1997 (or the equivalent relevant UK adopted standard in force at the time of the measurements).

(b) The microphone should be mounted at 1.2 - 1.5 m above ground level, fitted with a two layer windshield or suitable equivalent approved in writing by the local planning authority, and placed outside the complainant's dwelling. Measurements should be made in "free-field" conditions, so that the microphone should be placed at a location approved in writing by the local planning authority and at least 3.5 m away from the building facade or any reflecting surface except the ground.

(c) The  $L_{A90,10min}$  measurements should be synchronised with measurements of the 10-minute arithmetic average wind speed and with operational data from the turbine control systems of the wind farm.

(d) The wind farm operator shall continuously log arithmetic mean wind speed and arithmetic mean wind direction data in 10 minute periods from the on-site anemometry mast to enable compliance with the conditions to be evaluated. Such data shall be measured at a height of 10 metres, corrected for the difference between the mast location used for the baseline measurements based on a correlation exercise approved in writing by the local planning authority, and at hub height.

### NOTE 2

(a) The noise measurements should be made so as to provide not less than 100 valid data points as defined in Note 2 paragraph (b). Such measurements should provide valid data points for the range of wind speeds, wind directions, times of day and power generation approved in writing by the local planning authority. In specifying such conditions the local planning authority shall have regard to those conditions which were most likely to have prevailed during times when the complainant alleges there was disturbance due to noise. At its request the wind farm operator shall provide all of the data collected under Conditions 20 and 22 to the local planning authority.

(b) Valid data points are those that remain after all periods during rainfall have been excluded.

(c) A least squares, "best fit" polynomial curve of a maximum 2<sup>nd</sup> order should be fitted to the data points and define the rating level at each integer wind speed.

### NOTE 3

Where, in the opinion of the local planning authority noise emissions at the location or locations where assessment measurements are being undertaken contain a tonal component, the following rating procedure should be used.

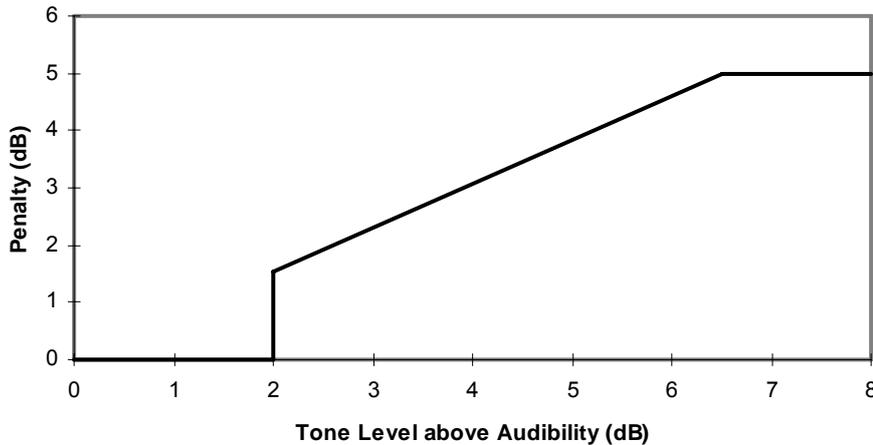
(a) For each 10-minute interval for which  $L_{A90,10min}$  data have been obtained as provided for in Note 1 a tonal assessment is performed on noise emissions during 2 minutes of each 10 minute period. The 2 minute periods should be regularly spaced at 10 minute intervals provided that uninterrupted clean data are available. Where clean data are not available, the first available uninterrupted clean 2 minute period out of the affected overall 10 minute period shall be selected. Any such deviations from standard procedure shall be reported.

(b) For each of the 2-minute samples the margin above or below the audibility criterion of the tone level difference,  $\Delta L_{tm}$ , should be calculated by comparison with the audibility criterion given in Section 2.1 on pages 104-109 of ETSU-R-97.

(c) The margin above audibility is plotted against wind speed for each of the 2-minute samples. For samples for which the tones were below the audibility criterion or no tone was identified, substitute a value of zero audibility.

(d) A linear regression should then be performed to establish the margin above audibility at the assessed wind speed for each integer wind speed. If there is no apparent trend with wind speed then a simple arithmetic average shall be used.

(e) The tonal penalty is derived from the margin above audibility of the tone according to the figure below. The rating level at each wind speed is the arithmetic sum of the wind farm noise level, as determined from the best fit curve described in Note 2, and the penalty for tonal noise.



NOTE 4

If the rating level is above the limit set out in the conditions, measurements of the influence of background noise should be made to determine whether or not there is a breach of condition. This may be achieved by repeating the steps in Note 2, with the wind farm switched off, and determining the background noise at the assessed wind speed,  $L_3$ . The wind farm noise at this speed,  $L_1$ , is then calculated as follows where  $L_2$  is the measured level with turbines running but without the addition of any tonal penalty:

$$L_1 = 10 \log \left[ 10^{L_2/10} - 10^{L_3/10} \right]$$

The rating level is re-calculated by adding the tonal penalty (if any) to the derived wind farm noise  $L_1$ . If the rating level lies at or below the values set out in the conditions then no further action is necessary. If the rating level exceeds the values set out in the conditions then the development fails to comply with the conditions.

NOTE 5

Amplitude Modulation (AM) is the regular variation of the broadband aerodynamic noise caused by the passage of the blades through the air at the rate at which the blades pass the turbine tower. ETSU-R-97, "The Assessment and Rating of Noise from Wind Turbines", assumes that a certain level of AM (blade swish) is intrinsic to the noise emitted by the wind turbine and may cause regular peak to trough variation in the noise of around 3 dB and up to 6 dB in some circumstances. The noise assessment and rating

framework recommended in ETSU-R-97 fully takes into account the presence of this intrinsic level of AM when setting acceptable noise limits for wind farms.

Where the local planning authority considers the level of AM may be at a level exceeding that envisaged by ETSU-R-97, they may require the operator to appoint an approved independent consultant to carry out an assessment of this feature under Condition 24. In such circumstances, the complainant(s) shall be provided with a switchable noise recording system by the independent consultant and shall initiate recordings of the turbine noise at times and locations when significant amplitude modulation is considered to occur. Such recordings shall allow for analysis of the noise in one-third octave bands from 50Hz to 10kHz at intervals of 125 milliseconds. The effects of amplitude modulation are normally associated with impacts experienced inside properties or at locations close to the property, such as patio or courtyard areas. For this reason the assessment of the effect necessarily differs from the free-field assessment methodologies applied elsewhere in these Guidance Notes.

If, over a period of 6 months, commencing at a time of the first occasion at which the local planning authority records an amplitude modulation event, the complainant fails to record 5 occurrences of significant amplitude modulation, in separate 24 hour periods, then its existence as a contributor to the noise complaint shall be excluded. If, however, the independent consultant, on analysis of the noise recordings, identifies that amplitude modulation is a significant contributor to the noise complaint then the local planning authority shall be informed in writing.

Tables 1 & 2 on next page -

## TABLES OF NOISE LIMITS

Table 1: Between 23:00 and 07:00 hours (Noise Level in dB  $L_{A90, 10min}$ ):

Location	Wind speed at 10 m height (m/s) at on-site anemometry mast									
	3	4	5	6	7	8	9	10	11	≥12
Botney Lodge	43	43	43	43	45	47	50	53	56	59
Top Barn Farm	43	43	43	43	45	47	50	53	56	59
Hill Top Farm	43	43	43	43	45	47	50	53	56	59
Hill Farm	49	49	49	50	51	53	54	56	59	61
Shawell Lodge Farm	49	49	49	50	51	53	54	56	59	61
Melbourne Lodge	43	44	45	47	48	50	52	54	56	58
Poplar's Farm	43	44	45	47	48	50	52	54	56	58
Thornhill Stud	43	44	45	47	48	50	52	54	56	58
London Lodge	43	44	45	47	48	50	52	54	56	58
Orchard Farm	43	44	45	47	48	50	52	54	56	58
Penfoland	47	48	50	51	52	52	53	54	55	56
Denyer's Barn	47	48	50	51	52	52	53	54	55	56
Swinford Lodge	47	48	50	51	52	52	53	54	55	56
Kilworth Road	47	48	50	51	52	52	53	54	55	56
Un-Named Property*	47	48	50	51	52	52	53	54	55	56
Warren Farm	44	45	46	48	49	51	53	56	58	61
Lutterworth Road	44	45	46	48	49	51	53	56	58	61
Misterton Grange	44	45	46	48	49	51	53	56	58	61

Table 2: At all other times (Noise Level in dB  $L_{A90, 10min}$ ):

Location	Wind speed at 10 m height (m/s) at on-site anemometry mast									
	3	4	5	6	7	8	9	10	11	≥12
Botney Lodge	40	41	43	45	47	50	52	55	57	60
Top Barn Farm	40	41	43	45	47	50	52	55	57	60
Hill Top Farm	40	41	43	45	47	50	52	55	57	60
Hill Farm	56	57	58	59	60	61	62	64	65	67
Shawell Lodge Farm	56	57	58	59	60	61	62	64	65	67
Melbourne Lodge	47	47	48	50	51	53	54	56	58	60
Poplar's Farm	47	47	48	50	51	53	54	56	58	60
Thornhill Stud	47	47	48	50	51	53	54	56	58	60
London Lodge	47	47	48	50	51	53	54	56	58	60
Orchard Farm	47	47	48	50	51	53	54	56	58	60
Penfoland	51	51	52	53	54	55	56	57	58	59
Denyer's Barn	51	51	52	53	54	55	56	57	58	59
Swinford Lodge	51	51	52	53	54	55	56	57	58	59
Kilworth Road	51	51	52	53	54	55	56	57	58	59
Un-Named Property*	51	51	52	53	54	55	56	57	58	59
Warren Farm	49	50	51	52	53	55	56	58	60	62
Lutterworth Road	49	50	51	52	53	55	56	58	60	62
Misterton Grange	49	50	51	52	53	55	56	58	60	62

\* Unoccupied un-named property west of Lutterworth Road

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Graham Jordan BSc	Local resident and member of ProWA.
Keith Warren	Retired consultant.
Professor John Twidell MA DPhil FinstPhysics	Visiting lecturer at the University of Reading, Oxford University and City University.
Herbert Eppel	Member of ProWA and CPRE.

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[Note – CD5-15,17 and 18 are omitted from the bundle.]

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- 1 Figure 1.1 Planning Application Boundary 17768-R68.dwg caryg, March 2008.
- 2 Figure 4.1 Wind farm Layout 17768-R69.dwg caryg, March 2008.
- 3 Figure 4.8 Swinford Corner Temporary Junction 17768-R95a.dwg caryg, March 2008.
- 4 Figure 4.9 Wood Farm Temporary Junction 17768-R94a.dwg caryg, March 2008.
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## PROOFS OF EVIDENCE

### Appellant

- PoE1.1 Proof of evidence of Dr Edis BA(Hons) MA PhD MIFA MIHBC.
- PoE1.2 Summary.
- PoE1.3 Appendices 1-6.
- PoE2.1 Proof of evidence of Rob Bourn BA(Hons) MA MIFA.
- PoE2.2 Summary.
- PoE2.3 Appendices 1-5.
- PoE3.1 Proof of evidence of David Kenyon BA MA MRTPI MIHBC, including Appendices A-C.
- PoE3.2 Summary.
- PoE4.1 Proof of evidence of Marc van Grieken ingenieur CMLI BNT
- PoE4.2 Summary.
- PoE4.3 Appendices A and B.

- PoE5 Proof of evidence of Dr Andrew McKenzie PhD BSc MIOA, including Summary and Appendices 1-12.
- WS1 Written statement by Caroline Gettinby BSc(Hons) MAppEnvSc Member Institute of Ecology and Environmental Management and a Chartered Environmentalist.
- Harborough District Council
- PoE6.1 Proof of evidence of Andrew Brown BA BArch MSc MRTPI RIBA IHBC, including Summary.
- PoE6.2 Appendices 1-8.
- PoE7.1 Proof of evidence of Mark Patterson BA(Hons) DipTP MRTPI
- PoE7.2 Summary.
- PoE7.3 Appendices 1-4.
- SSWFAG
- PoE8.1 Proof of evidence of Michelle Bolger CMLI DipLA BA(Hons) LA PGCE BA(Hons) ENG.
- PoE8.2 Summary.
- PoE8.3 Appendices 1-8 and Figures 1-8.
- PoE9.1 Proof of evidence of James Croucher MTP MRTPI, including Appendix 1.
- PoE9.2 Summary.
- PoE10.1 Proof of evidence of David Havergill BSc(Hons) MIOA
- PoE10.2 Summary.
- PoE10.3 Appendices 1-8.
- PoE11 Proof of evidence of Dr Christopher Hanning BSc MB BS MRCS LRCP FRCA MD, including Summary.
- PoE12 Proof of evidence of Jonathon Finch MB ChB FRCS MD.
- PoE13.1 Proof of evidence of Keith Kilbane MioM (Ret'd).
- PoE13.2 Summary.
- PoE13.3 Appendices A-K.
- PoE14.1 Proof of evidence of Judith Wiggins.
- PoE14.2 Appendices 1-10 and Photographs 11-23.
- PoE15.1 Proof of evidence of Philip Jebson, Chairman of Swinford Parish Council.
- PoE15.2 Appendices 1-3.
- PoE16.1 Proof of evidence of Dawn Money.
- PoE16.2 Appendices 1-8.
- PoE17.1 Proof of evidence of Dr Melanie Aram GP.
- PoE17.2 Appendices 1-7.
- PoE18.1 Proof of evidence of Catherine Ragsdale.
- PoE18.2 Appendices 1-4.
- PoE19.1 Proof of evidence Professor IC Eperon.
- PoE19.2 Appendices 1-5.
- PoE20 Proof of evidence of Debbie Adlerstein.
- PoE21.1 Proof of evidence of Vicky Allen Chairman of Leicestershire & Rutland Bridleways Association and British Horse Society East Midlands Regional Access & Bridleways Officer.
- PoE21.2 Appendices 1-2.
- PoE22 Proof of evidence of Nicholas Fothergill.
- PoE23.1 Proof of evidence of Wendy Warren, Archaeological and Heritage Warden.
- PoE23.2 Appendices 1-4.

- PoE24.1 Proof of evidence of Clare Waters, Archaeological and Heritage Warden.
- PoE24.2 Appendices 1A-5C.
- WS2.1 Written statement by Jonathan Blockley.
- WS2.2 Appendix.
- WS3 Written statement by Joseph Benoist.
- WS4.1 Written statement by Keith Kilbane MioM (Ret'd).
- WS4.2 Appendices 1 and 2 including video clip.

#### DOCUMENTS SUBMITTED AT THE INQUIRY

##### Appellant

- N11 Agreement on noise issues between Nuon and the Action Group, dated 17 July 2009.
- N12 Opening statement on behalf of the appellant.
- N13 Proof of evidence Andrew Brown for Kiln Pit Hill Inquiry, dated December 2008.
- N14 Cross section between Poplar's Farm and proposed location of turbine 7 and temporary anemometer, dated July 2009. [requested by Inspector]
- N15.1 Additional text to Table 4.1 of ES, Summary of design iterations.
- N15.2 Further additional text to Table 4.1 concerning design iterations.
- N16 Revision to ES Figure 6.3 showing 'other route with public access' through grounds of Stanford Hall.
- N17 *A Brief Summary of Health Concerns in Relation to Wind Farms*, Stop Swinford Wind Farm Action Group, May-June 2008.
- N18 Extract from *A better quality of life*.
- N19 *(1) Derbyshire Dales DC (2) Peak District National Park and (1) SoS (2) Carsington Wind Energy Ltd* [2009] EWHC 1729 (Admin). Case No: CO/10280/2008.
- N20 *The UK Renewable Energy Strategy*, HM Government, 2009.
- N21 Extract from *The UK Low Carbon Transition Plan*, HM Government, 2009.
- N22 Letter from Council to appellant, dated 12 June 2009, concerning minimisation of impact.
- N23 Figure 12.1 of draft ES showing position of 18 proposed wind turbines.
- N24 *M1 Junction 19 Improvement Environmental Impact Assessment Scoping Report*, Highways Agency, March 2009.
- N25 Plan showing position of temporary anemometer used for recording 10 m high wind speeds used in correlation with background noise levels.
- N26 Closing submissions on behalf of the appellant.
- N27 Judgements 1-11 cited by the appellant.

##### Harborough District Council

- H1 Opening statement on behalf of the planning authority.
- H2 *R v SSETR ex p Challenger* [2001] Env.L.R. 12 pages 209-226.
- H3 Plan showing boundary of Registered Park and Garden with setting of Hall and Park.
- H4 Letter from English Heritage to the Council concerning Low Spinney Farm, dated 30 March 2009.
- H5 Closing submissions on behalf of the planning authority.

##### SSWFAG

- S12 Opening on behalf of Stop Swinford Wind Farm Action Group.
- S13 Written rebuttal proof of evidence by IC Eperon BSc PhD.

- S14 Appeal decision at Silloth, Ref: APP/G0908/A/08/2073524.
- S15 Appeal decision at Goverton, Ref: APP/K1128/A/08/2072150.
- S16 Appeal decision at Bearstone, Ref: APP/L3245/A/08/2088742.
- S17 Appeal decision at LLangynwyd, Ref: APP/Y6930/A/02/1103415.
- S18 Extract from *Energy Strategy*, pages 14/15.
- S19 Accident data for Walcote Road, by Dr Melanie Aram.
- S20 Maps with marked footpaths, by Professor Eperon.
- S21 Noise and Wind Turbines powerpoint presentation by Andrew Bullmore.
- S22 Wind turbine accident compilation – UK and Eire.
- S23 Extract from BWEA website.
- S24 Blade failure 1970s to 2009.
- S25 *Wind Turbine Noise and Natural Sounds – Masking, Propagation and Modeling*, Doctoral Thesis by Karl Bolin, 2009.
- S26 Tether adjustment for wind offsets for blimp.
- S27 Closing submissions on behalf of Stop Swinford Wind Farm Action Group.

#### Other documents

- ID1 Notification letter about the Inquiry and list of those notified.
- ID2 Statement by Grahame Jordan BSc for Pro Wind Alliance.
- ID3 Statement by Herbert Eppel for Pro Wind Alliance.
- ID4 Proof of evidence by Professor John Twidell MA DPhil FinstPhysics.
- ID5.1 *Consultation paper on a new Planning Policy Statement 15: Planning for the Historic Environment.*
- ID5.2 *Practice Guide – Living Draft.*
- ID6 Addendum to SoCG on behalf of Nuon and Harborough District Council – description of proposed development.
- ID7 Schedule of projects for cumulative impact.
- ID8 *IT Power: Sites considered for large wind turbines.* Market Harborough, Table 1, Entec.
- ID9 Statement by Keith Warren MA MBE.
- ID10 Addendum to SoCG on behalf of Nuon and Harborough District Council – concerning access Drawing No.22991 – R01 Rev B.
- ID11.1 Draft proposed planning conditions.
- ID11.2 Email from Council, dated 31 July 2009, with draft proposed planning conditions incorporating amendments agreed at the Inquiry.